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# Effects of Web-Based Academic Projects on EFL Students Writing Performance, Critical Thinking Skills and Writing Motivation

Yirga, Tseganesh

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**BAHIR DAR UNIVERSITY**  
**SCHOOL OF TEACHER EDUCATION**  
**DEPARTMENT OF LANGUAGE EDUCATION**

**EFFECTS OF WEB-BASED ACADEMIC PROJECTS ON EFL  
STUDENTS' WRITING PERFORMANCE, CRITICAL  
THINKING SKILLS AND WRITING MOTIVATION**

**BY:**

**TSEGANESH YIRGA**

**JUNE, 2025**  
**BAHIRDAR, ETHOPHIA**



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**EFFECTS OF WEB-BASED ACADEMIC PROJECTS ON  
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THINKING SKILLS AND WRITING MOTIVATION**

**DISSERTATION REPORT SUBMITTED TO SCHOOL OF  
TEACHER EDUCATION, BAHIR DAR UNIVERSITY, IN PARTIAL  
FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY IN TEACHING ENGLISH AS A  
FOREIGN LANGUAGE**

**By**

**Tseganesh Yirga**

**SUPERVISORS**

1. Prof. Abiy Yigzaw
2. Birhanu Simegn (PhD)

**June, 2025**

**BAHIRDAR, ETHOPHIA**

**BAHIR DAR UNIVERSITY**

**SCHOOL OF TEACHER EDUCATION**

**DEPARTMENT OF LANGUAGE EDUCATION**

**Approval of Dissertation for Defense**

We hereby certify that we have supervised, read, and evaluated this dissertation entitled “Effects of Academic Web-based Projects on EFL students’ Writing Performance, Critical Thinking Skills, and their Motivation towards Writing” by Tseganesh Yirga under our guidance. We recommend the dissertation be submitted for oral defense (mock and viva voce).

Signature

Date

Advisor: Prof. Abiy Yigzaw

Advisor: Birhanu Simegn (Dr.)

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**BAHIR DAR UNIVERSITY**  
**SCHOOL OF TEACHER EDUCATION**  
**DEPARTMENT OF LANGUAGE EDUCATION**

**Approval of Dissertation for Defense Result**

We hereby certify that we have examined this dissertation entitled “Effects of Web- based Academic Projects on EFL students’ Writing Performance, Critical Thinking Skills, and their Motivation towards Writing” by Tseganesh Yirga. We recommend that the dissertation is approved for the degree of “Doctor of Philosophy in Teaching English as a Foreign Language”.

**Board of Examiners**

External examiner’s: Dr. Yosef Mezgebu Signature ----- Date-----

Internal examiner’s: Dr. Yenus Nura Signature----- Date-----

Chair person’s name: Dr. Kassie Shifere Signature----- Date-----

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## ABSTRACT

*The main objective of the study was to examine the effects of Web-based academic projects on EFL students' writing performance, critical thinking skills and their motivation towards writing. A single group quasi-experimental design was employed, involving 35 second year English major students (30 males and 5 females) enrolled in advanced English course at Woldia University. Comprehensive sampling technique was used to select participants. Test was used to collect data about learners' writing performance and their critical thinking skills in writing before and after intervention. Questionnaire was used to collect data about learners' writing motivation before and after intervention. Textual analysis, students' diary analysis and focus group discussion were also employed as data gathering instruments in order to triangulate the data obtained through test and questionnaire. The data obtained through students' tests were analyzed quantitatively using one-way repeated measures Multivariate Analysis of Variance (MANOVA), as well as the data obtained through students' questionnaires were analyzed using paired sample t-test. On the other hand, the data gathered using textual analysis, focus group discussion and students' diary analysis were analyzed qualitatively through thematic analysis. Specifically, Google Docs was employed in this study among other academic Web-based writing applications. Hence, the results obtained from the MANOVA test indicated a significant difference in learners' writing performance and critical thinking skills before and after the intervention which,  $F(10, 11) = 9.013$ ,  $P = .01$ , Wilks' Lambda = .217,  $\eta^2 = .783$ , observed power = 1.000. Similarly, the result obtained through using the paired sample t-test showed significance difference between learners' writing motivation before and after intervention, particularly the highest mean difference was found in self-efficacy dimension in which its  $MD = -0.474$  ( $t = -7.794$ ,  $p < .05$ ). Likewise, the findings obtained through using the thematic analysis strengthen the statistical findings. Overall, the results of the study suggest that collaborative writing using academic web-based projects specifically, via Google Docs positively influenced students' writing performance, critical thinking skills, and their motivation towards writing. Therefore, EFL teachers can employ academic Web-based projects besides the face-to-face collaborative writing approach as a means to develop their students' writing performance and critical thinking skills, and increase their students' motivation towards writing through considering the necessary conditions in using it in to account.*

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## List of Abbreviations and Acronyms

The following lists of abbreviations and Acronyms are taken from this research dissertation report.

WAP:	Web-based Academic Projects
CTs:	Critical Thinking Skills
EFL:	English as a Foreign Language
ELT:	English Language Teaching
ICT:	Information Communication
IELTS:	International Language Teaching System
SPSS:	Statistical Package for Social Sciences
WCI:	Web-based Collaborative Instruction
WM:	Writing Motivation
WP:	Writing Performance
ZPD:	Zone of Proximal Development

# CHAPTER ONE: INTRODUCTION

## 1.1. Background of the Study

In the realm of education, a multitude of pedagogical approaches exists, each characterized by distinct philosophies regarding the nature of learning and instruction. For example, few believe the best way of teaching learning is implementing the process based on how students think and learn, some believe facilitating the learning process and helping learners to take responsibility for their own learning, and still others believe feeding students to learn by rote and helping them answer accordingly (Cole, 2006; Hogan & Pressley, 1997; Pawan, 2008). However, active engagement of students in the teaching and learning process is the main signal of best learning (Taylor, 1998). This assertion support in constructivist philosophy, which views learners as dynamic agents in their own educational processes. Within this paradigm, students are seen as capable of constructing new knowledge through interactions, negotiations, and collaborations that leverage their existing knowledge, skills, and strategies (Decorate, 2000; Jeong, 2016). Due to this, these days, the view of learning as a construction of knowledge has largely substituted the traditional view of learning as knowledge observation (Resnic, 1989).

In learning English, students are expected to master the fundamental skills highlighted in the English language classroom; however, many EFL students find it challenging, particularly when it comes to writing for both academic and general purposes (Dastgeer & Afzal, 2015; Younes & Albalawi, 2015). Along its difficulties, scholars in the area proposed basic approaches for the teaching of writing skill as product, process, genre and process-genre approaches (Badger & White, 2000).

The product approaches view writing as largely about linguistic knowledge, or language structure and writing development as assisted imitation, where the learners provide response to the stimulus given by the teacher. Substitution table can be an example for this (ibid, 94). To the contrary, the process approaches see writing primary as the exercise of linguistic skills and writing development as unconscious process which occurs when the teacher facilitate the practice of writing by the students, but providing input or stimulus for learners is considered less important. The process approaches also have a monolithic view of writing, which regard the process of writing the same in terms of what is being written and who is writing. Whatever

the text type is, the process approaches do not take the context where the writing is produced into concern (Hedge, 1988; While & Arnd, 1991). Although, the genre approaches are like the product approaches for they regard writing as predominantly linguistic, unlike the product approaches, they stress that writing varies with the social context in which it is produced. Therefore, for genre analysts, purpose is the fundamental aspect of the situation. So different kinds of genres like article report, letter of application or apology and among others are employed to achieve various purposes (Flowerdew, 1993).

Besides the above three approaches, process-genre approach is a more recent approach to teaching writing, and it is also known as eclectic approach since it is developed taking contents from the three teaching writing approaches for instance: focusing on knowledge about language from both product and genre approaches, emphasizing on knowledge about the context in which the writing produces, particularly the purpose for writing from genre approach, as well as underlying on skills in using language from the process approach. Hence, the process-genre approaches view writing as a series of stages that stands from a particular context, or situation, and or a particular model text to help students write their own text accordingly, through the teacher facilitating students' progress by enabling them appropriate input of knowledge and skills (Badger & White, 2000).

level Local researches which have been conducted by Daniel (2004) and Dawit and Yalew (2008) revealed that as many teachers still use lecture teaching method. This implies that the product approach is the most common approach largely applied in Ethiopia schools, particularly at the University level. But the product approach does not usually encourage learners to actively participate in teaching learning process like: through asking questions, solving problems themselves, constructing new knowledge themselves, and thinking critically about issues (Graham, MacArthur; Fitzgerald, 2013, Yen, 2014). In this case, it requires promoting interactive and innovative instructional method like Web-based collaborative instruction, or academic Web-based projects that delivered through Google Docs. Because, first, when students work as a team, they are more likely to take responsibility for their own learning and develop their ability to think critically about interrelated issues. Next, collaborative process benefits through enhancing students' learning, and developing their social skills related to decision making and communication skill (Smith & MacGrego, 2009). Furthermore, it helps to improve students' level of motivation and satisfaction about their learning (Kowal & Swain, 1994; Swain & Lapkin, 1998). Particularly, the online

collaboration via Google Docs, allows students to work together in real time, fostering teamwork and communication skills (Smith, 2020). Collaboration using Google Docs, students can also provide and receive instant feedback on their work through encouraging peer editing and revision, which in turn enhances students' writing quality, and the learning process in general (Johnson, 2019; Thompson, 2022). In addition, Google Docs can be accessed from any device with internet connectivity, this allows students to collaborate anytime and anywhere. Moreover, the interactive nature of Google Docs can lead to higher level of students' engagement and motivation (Martinez, 2023). Therefore, in the current study, the process-genre was much favored among the other teaching writing approaches, because it focused on helping learners to develop their writing performance, critical thinking skills and writing motivation through creating a conducive collaborative environment for learners to practice the skill with unlimited exposure in place and time, supporting the process with Web-based writing application. Furthermore, it includes providing input and feedback, when necessary, by giving emphasis not only for linguistic knowledge but also for skill practices.

Conceptually, going through technology-based collaborative writing instruction independently in terms of instruction first, collaborative writing is derived from collaborative learning and refers to the engagement of two or more writers in the production of a single work. For example, students may collaborate to compose an argumentative paragraph or any other type of writing assignment (Jeong, 2016). In this study, the collaborative writing was largely based on Vygotsky's (1978) work, which emphasizes the important role of social interaction and communication with technology assistance for learning activated via the Zone of Proximal Development (ZPD) (Dillonbourg, 1999). As a result, academic Web-based projects in this study were operationalized as a method of teaching writing argumentative essays using collaborative writing tasks prepared in a manner appropriate for Web-based learning, and the process from beginning through end was delivered for students to work together using an online writing application, specifically via Google Docs.

Collaborative learning, which is directly associated with the Zone of Proximal Development (ZPD) theory, emphasizes that students can attain substantially greater levels of learning performance when they work collaboratively in a team rather than independently (Jeong, 2016). Indeed, experts like, Hogan and Pressley (1997) feel that collaborative learning is not as simple as cooperative learning. In collaborative learning, students autonomously organize and allocate responsibilities among themselves, coordinating their efforts and sourcing

materials that will facilitate the completion of their tasks independently. The activities undertaken by the group are not subject to constant oversight by the instructor; however, the teacher remains available to offer guidance and support upon request from the group members. Therefore, students are fully engaged in assessing not only their own individual performance but also their performance as a group and their group members performance. As a result, students collaborate to complete a meaningful activity. However, in cooperative learning, students play a relatively restricted role. Because the teacher structures all of the activities and assigns each student a specific role in the activities, students are not left to rely on their own devices to find information relevant to the content. The teacher also assesses group work; students simply submit the completed work at the end of the lesson or discussion.

Many earlier research studies underlined the value of collaborative learning in teaching English in general, and writing skills in particular. For example, Alwasilah (2001) proposed collaborative writing as an alternative method to help students strengthen their writing skills. In addition, Min (2005), Bijami (2013), and Yu and Lee (2015) demonstrated that collaborative writing is an excellent pedagogical strategy for promoting the teaching and learning of second language writing. Thus, over the last few decades, it has been widely used in second language classrooms to foster an interactive class-room environment (Storch, 2005; Debao, 2012; Wigglesworth & Storch, 2012).

Research has also reported that students can achieve better when they are engaged in collaborative interaction with others in and out of the classroom than those who cannot get the opportunity to engage (Jeong, 2016). Therefore, having students to work together should not be restricted to class communication, because students may not get enough time to support each other, and the teacher may also face time constraints to make follow up and give immediate feedback on students' work (Hewitt & Scardomalia, 1998). In this circumstance, supporting the collaborative learning process with online educational technology plays an outstanding role in teaching English in and out of the classroom in general, and writing skills in particular (Elola & Oskoz, 2010; Sholihaha & Setyandaria, 2018; Marza & Hafizh, 2019).

According to Zhu (2012), using online educational technologies enable learning communities, to generate and share information; practice critical reflection; test and negotiate synthesis and reach into harmony. Therefore, they can maximize their knowledge construction

through participating in collaborative written assignments, group discussions, debates and critiques of arguments. In addition, Kinzer (2010) finds that technology helps students to create different styles of writing, provides new sources of data like, (the Internet, search engines, blogs and texting) and allows writers, teachers, and students to share, edit, and collaborate. However, writing through online application has been proved to be incredibly encouraging after students have had a variety of experiences and choices during their writing practice.

The literature reveals a significant increase in interest in collaborative writing, in contrast to earlier views that considered writing primarily as a solitary endeavor, due to the evolution of workplace writing, as well as the emergency of Web 2.0 applications such as Google Docs, blogs, and wikis, which have altered writing practices by facilitating collaboration and making text creation more accessible. Consequently, writing is now frequently done in teams rather than alone, and there is also an increasing emphasis on collaborative practices in second language classrooms in response to the collaborative potential of Web 2.0 tools (Kessler, 2009; Kessler & Bikowski, 2010; Storch, 2005).

Accordingly, along with the development of ICT today, there are free online media that can be used as media for teaching and learning of writing in collaborative environment such as: blogs, webpages, and social networking systems like: (face-book, Twitter, Yahoo, Google + and among others). One of the appropriate media that often used by lecturers and students in teaching and learning writing is Google Docs (Metilia & Fitrawati, 2018). One advantage of Google Doc over other Web apps such as blogs, wiki, and others is, its ability to provide numerous services to users. For example, blogs simply allow users to store and share documents, whereas Google Docs allows users, or learners to create and edit documents online while collaborating with other users in real time. This, in turn, accelerates the process of providing and receiving feedback among students, as well as between teachers and students through making collaboration easier (Chiu et al, 2014). Furthermore, Google Docs is chosen for it allows a quick and comfortable information flow between users, or among group members (Sharp, 2009; Suwantarathip & Wichadee, 2014 & Thompson, 2008)

Google Docs is one of the features of Google which was created during the era of Web 2.0 application, and allows learners to implement learner-centered approach in a collaborative environment. As Zhou et. al, (2012) noted that, Google Docs is a favorable learning tool that can facilitate collaborative writing. As a writing platform, Google Docs has also various

features such as: it is a free, Web-based word processor, spread sheet, presentation, form, and data storage service. These entire unique features allow Google Docs to provide users multiple services like: create, store, share and edit document online. Furthermore, Google Docs is easy, fast and well-suited online web application that helps facilitate digital writing workshops through involving peer editing with cooperative grouping and small group fine-tuned writing instruction (Thompon, 2008). Similarly, Sharp (2009) strengthen many of the ideas raised by Thompson and suggested that as this collaborative editing tools allow a group of individuals to edit a document simultaneously while they can view the changes made by others in real time through sharing the document and keeping the document online, so that they can access it anytime.

Many research works have consistently demonstrated the significance of collaborative writing using Google Docs in different ways. For example, Chinnery (2008) stated that Google Docs is a productive tool where learning activities can be designed differently and creatively. For instance, an instructor might post a text, intentionally replete with errors, for learners to correct. Likewise, learners can easily peer-edit, as this program leaves an editing trail. Another option is chain storytelling, where an instructor begins a story which each learner contributes to in turn. In addition, students' fluency and accuracy can be improved through online collaborative writing (Elola & Oskoz, 2010) and strengthens the opportunity of exchanging feedback with peers (Ware & O'Dowd, 2008). Moreover, Black (2005) stated on-line discussions using Google Docs are able to encourage students' inquiry and promote both reflection and critical thinking skill.

Above all explanations, in using online technology to serve education, many countries including Ethiopia are trying to employ it during the pandemic because educational institutions at all levels were closed to minimize the spread of COVID 19 (WHO, 2020). However, the practice of changing the conventional learning way into online learning system or supporting it with online technologies regularly is very limited in Ethiopia. Particularly, ICT usage at university level is still at very early stage of development, in spite of Government's effort to promote it. According to the Ethiopian Ministry of Education MoE (2006), the role that ICTs can play in widening access to education to a wider section of the population cannot be underestimated. ICT is therefore praised for assisting and augmenting literacy.

As Alemu (2017) noted, shortage of public funds to train instructors to use ICT, large class size and the designation of ICT as a discrete subject were considered as the main factors that

hampers the process of supporting the teaching and learning with online educational technologies, or e-learning. But working in overcoming these difficulties has a decisive role in improving the learning outcomes, especially in teaching students of the 21<sup>st</sup> century. It is also suggested that ICT benefits education systems to provide quality education in alignment with constructivism, which is a contemporary paradigm of learning. It also identified a need for instructors and higher education institutes to integrate ICT into teaching and learning using contemporary pedagogical approaches like, collaborative writing.

As a result, the present study was designed to investigate the effectiveness of academic Web-based projects, specifically via Google Docs on EFL students' writing performance, critical thinking skills and their motivation towards writing skill at the university level. Therefore, this study in focus was conducted at Woldia University on second year English major students who were taken advanced English course. Based on the preliminary study, which was conducted at Woldia University on these students by the researcher, more than 96 % of them had their own smart phone and personal computer, and the rest 4 % could also use the desktop computers which are found in English laboratory. Hence, these situations created conducive environment for the researcher to conduct the study through providing training to them on how to use Google to work collaboratively on writing tasks via Google Doc through their smart phones, personal computer and desktop computers. Subsequently, the students under investigation could easily access at any time inside the class-room and beyond the classroom via internet connection. Moreover, Web-based collaborative writing instruction can be effectively implemented at the university since many of the universities including Woldiya University are organized in the manner to promote it. For instance, in many of the local universities there is unlimited internet access for both teachers and students, as well as the universities' language laboratories and libraries have organized with the needed technological tools and internet access. Therefore, it can be easily applied there through providing awareness training for all concerned university communities on how to use it properly for teaching and learning purpose. Hence, the focus of this study was progressed from individual learning to collective learning and from in-class assignments, or face-to-face collaborative writing tasks to Web-based out of class writing tasks, or projects.

## 1.2. Statement of the Problem

Having high proficiency in writing is very mandatory for students at all level, especially university students should master writing skill since most of their subjects require writing assignments, making presentation slides in English as a task or part of their final exam (Scott & Mouza, 2007). However, it is not an easy task for teachers to help students improve their writing skill and maintain their interest while writing (SirRahyu, 2016). The intricate nature of writing skill can be considered as one factor that makes the teaching of writing difficult since it requires teaching of various topics, providing clear instruction, as well as making follow up to offer immediate feedback on the spot (While & Mouzay, 2007). Similarly, the skills needed from teachers in teaching writing like, creativity, the ability to think critically and helping students to use the appropriate grammatical structure make the process very challenging (SirRahyn, 2016). Hence, all reasons above contribute for writing skill to be the most difficult one and to get success on the skill when compared with other skills in English language (Kroll, 2001).

There are also snags that students have commonly experienced in writing. First, students have limited ability to generate idea for their composition. Second, students are poor in using the appropriate language structure. Sometimes, the students have ideas in their mind to write something, but they cannot write properly using the accurate grammar. Third, students are not interested to write. It is because the learning and teaching process do not motivate them. Particularly, let students to compose a given writing task individually exposes them to be less confident in conducting their own writing task and it exposes some students to simply copy their friends writing work. Another problem that students' face is come from the teacher's way in teaching. The teachers are not very technical in choosing and using teaching method that initiates students' motivation and interest to learn writing skill. It also surely affects the outcome of the learners' writing performance (Metilia & Fitrawati, 2018).

The same is true for students of the current study. It was found that significant number of students scores low in writing assignments and tests according to preliminary study which was conducted by the researcher before the main study. In addition, as Bantalem (2021) stated, EFL students' at Woldia University had faced different kinds of writing problems such as lack to write clear thesis statements, shortage to support their writing with strong evidence, and unable to detect claims and evidences. They were also in difficulty to compose effective written

texts that consider basic writing aspect in terms of task response, coherence and cohesion, lexical resources, and grammatical range and accuracy. In the same manner, the students were not on the way to improve their critical thinking skills in writing class since the teachers did not use appropriate method that encourage them to develop it and overcome all the pitfalls of the students faced in writing.

Local research works in line with teaching writing reported, poor writing instruction and inadequate writing practice were among the factors that resulted students to experience difficulties in writing. In the studies, it also indicated that using poor writing instruction leads learners to score low in writing tasks, and to accomplish the given writing tasks below the expected level in Ethiopia, particularly at the University level (Alemu, 2004; Alamirew, 2005; Dawit, 2013, Mesfine, 2013, & Harris, 2015).

Specifically, Bekele (2011) noted that significant number of university teachers highly depend on providing notes and sometimes models, and simply let their students to read the notes and to compose texts according to the models given while they teach writing. This implies, as there is a huge gap from the teachers' side to use appropriate and innovative teaching methods that help learners' to actively engage in the teaching learning process, to be responsible of their own learning, to develop their confidence, as well as to achieve better in the skill. In relation to this, as Oxnovad (2013) explained, using familiar approach repeatedly is ineffective and boring for students of the 21<sup>st</sup> century, and he recommended integrating online educational technologies in teaching writing to bring very significant, or positive learning outcome among them.

Similarly, several studies also reported that supporting the teaching and learning process using online technologies have brought a positive influence on learners' interest to learn, and their learning outcome as well (Eg. Marza & Hafizh, 2013; Blankenship & Margarella, 2014). Therefore, as explained above, since students of the current study area had experienced difficulties in writing it is a must to apply innovative and interactive method like Web-based collaborative writing instruction, or academic Web-based projects in order to solve the problems, unless producing students who have the desired qualification in writing is a night mare. Accordingly, this study focused on investigating the effects of academic Web-based projects, particularly via Google Docs on EFL students' academic writing performance, critical thinking skill in writing and their motivation towards writing.

Many studies compared student learning between online technology group and face-to-face group in second language classes, and findings were different. A number of studies have found that the use of online technology in the classroom can facilitate collaborative learning among students and promote learning outcomes (Raman, Ryan, & Olfman, 2005; Chen, 2008; Chou & Chen, 2008; Vaughan, 2008). Other findings suggest that students perceived Google Docs as a useful tool for group work (Brodahl, Hadjerrouit, & Hansen, 2011; Zhou, Simpson, & Domizi, 2012). Students believed that a document that was written collaboratively might have higher quality than a document written alone (Blau & Caspi, 2008). However, online collaborations might also lead to unpleasant learning experiences. For example, students and instructors might feel uncomfortable in sharing knowledge (Rick & Guzdial, 2006). Students believed it was not appropriate to change other students' written products, and they may not all contribute equally to the assignment (Coyle, 2007).

Particularly, the study conducted by Kessler (2018) on the impact of collaborative writing on EFL students' writing skill and motivation found that using Google Docs for collaborative writing improved EFL students writing performance, and increased their motivation to write. Similarly, the other study which has been conducted by Hawang et. al (2019) on effects of collaborative writing on EFL learners' critical thinking skills and writing performance demonstrated that collaborative writing through Google Docs enhanced students' critical thinking skills and overall writing performance. However, a case study conducted by Zhang et. al (2020) highlighted some negative aspects, such as technical difficulties and unequal participation among group members, which hinders the effectiveness of Google Docs in improving writing skills. The other empirical investigation by Almuhanha (2021) also indicated that while some students benefited from collaborative writing, others faced challenges that negatively impacted their motivation and engagement in the writing process.

Going through the studies, as far as the present researcher's knowledge is concerned, although there have been various foreign researches looking in to the possibilities of collaborative writing using online technologies, to date, the study of academic Web-based collaborative writing instruction has left unexplored in Ethiopian context. Moreover, many previous foreign research works were focused on examining learners' perception about collaborative writing using Google Docs, and exploring the effects of collaborative writing using Google Docs on students' writing performance, and or its effects on either with their critical thinking skills, or

their motivation separately through largely using qualitative research methods. Nevertheless, the current study has gone beyond, through investigating the effects of academic Web-based collaborative projects via Google Docs on learners' academic writing performance, critical thinking skills and writing motivation together employing both quantitative and qualitative research methods. Besides, it also tried to survey factors that influence the process.

Thus, the results of this study will full-fill the gaps through providing an insight into how technology can be used to support students' mutual learning and how much collaboration on written assignments in an online learning environment have on undergraduate EFL students' academic writing performance, critical thinking skills and their motivation towards writing. Specially, if academic Web-based projects using Google Docs is effective in facilitating target learners' writing skill, critical thinking skills and motivation in EFL context, it will be a new choice for EFL teacher and students.

### **1.3. Research Questions of the Study**

This study tried to answer the following research questions:

1. Was there a significant difference in EFL students' writing performance before and after the intervention of academic Web-based projects via Google Docs?
2. Was there a notable difference in EFL students' critical thinking skills before and after the intervention of academic Web-based projects via Google Docs?
3. Was there a significant change in EFL students' writing motivation before and after the intervention of academic Web-based projects using Google Docs?
4. What are EFL students' experiences in working on Web-based academic projects via Google Docs?

### **1.4. Objectives of the Study**

#### **1.4.1. General Objective of the Study**

This study aimed at examining the effects of Web-based academic writing projects specifically, via Google Docs on EFL students' writing performance, critical thinking skills, and writing motivation.

#### 1.4.2. Specific Objectives of the Study

More specifically, this study was designed to:

1. examine whether or not there exists a significant difference in EFL students' writing performance before and after the intervention of Web-based academic projects using Google Docs.
2. determine whether or not there is a notable difference in EFL students' critical thinking skills before and after the intervention of Web-based academic projects using Google Docs
3. identify whether or not there is a significant change in EFL students' writing motivation before and after the intervention of Web-based academic projects using Google Docs.
4. explore EFL students' experiences in working on Web-based academic projects via Google Docs?

#### 1.5. Significance of the Study

The findings of this study will be significant for ELT, EFL teachers, EFL students, other subject teachers, curriculum designers, future researchers and scholars in the area in different ways. Thus, it is explained in the following sub-sections through classifying them as practical and theoretical significances.

##### 1.5.1. Practical Significance of the Study

Practically, Web-based teaching learning has become popular and a new trend of education provision in the world today. It is also found very important in teaching learning of English in general and writing skill in particular. Therefore, this study can have great contribution in upgrading ELT on step ahead from the traditional face-to-face collaborative approach to the modernized Web-based teaching and learning approach in teaching students of 21<sup>st</sup> century.

The study also helps EFL teachers' to be aware about the new Web-based collaborative writing instruction since it provides them an opportunity to help their students learn writing skill beyond the classroom actively. Specially, since it is more helpful when they face time shortage of face-to-face interaction in the classroom in order to provide immediate feedback on students work while the process of writing.

As the same time, EFL students' themselves gain great opportunity to develop their writing skill through practicing the skill beyond the classroom. Because, sometime may not have much time to read and build on each other work while working together in the class-room. Hence, this Web-based collaborative writing approach provides a chance for students to share their experience and knowledge among their group members and their EFL teacher without time and place limit.

This study might also benefit other teachers who teach other subjects through implementing this Web-based collaborative instruction in order to enhance their students' knowledge and understanding about various contents anytime and anywhere.

In addition, it is very essential for curriculum designers to take in to consideration this advanced online Web-application in collaborative writing when they prepare writing tasks, projects, assessment techniques and instructions for EFL students.

#### 1.5.2. Theoretical Significance of the Study

Theoretically, this study will be useful for future researchers for it may serve as starting point to undertake further research in the area at a large scale. They may start through observing the gap of this study. For example, they may investigate the effects among the dependent variables, and the effects of academic Web-based projects on other language aspects. Moreover, scholars in the area can use the findings of the study as source and to support their works in advance.

### **1.6. Scope of the Study**

The study was aimed at investigating the effects of academic Web-based collaborative writing projects specifically, via Google Docs on EFL students' academic writing performance, critical thinking skills and writing motivation. Conceptually, academic Web-based projects in this study focused on helping students to learn writing argumentative essays through working together on writing tasks which were prepared in the manner appropriate to online learning, and delivered through the writing online platform specifically, via Google Docs. Students' academic writing performance was investigated in terms of learners' ability to Task Achievement, Coherence and Cohesion, Lexical Recourses and Grammatical Range and Accuracy in writing tasks. Critical thinking skills were examined with reference to students'

ability to interpret, analyze, evaluate, infer, explain and self-regulate a given writing task. In addition, students' writing motivation was demonstrated on focusing the four basic motivational factors which include: self-efficacy, achievement goals, beliefs and affects about writing.

Geographically, the study was conducted at Woldia University among the other universities located in Amhara region. The university was selected for this study due the teacher researcher has seen the problem while she worked there, and based on the evidence obtained through conducting a preliminary study.

Methodologically, the study Design was a single subject quasi-experimental that employs a time series design with single group participants. This design was preferred since it allows to recognize the effects of *Web-based Academic Projects using Google Docs* through providing repeated assessments before and after the intervention for the participants, and making a proper comparison accordingly. However, the study did not examine the effect among the dependent variables because it was not manageable for the researcher to do so.

### **1.7. Limitation of the Study**

Generalizability of the Study is one of the major limitations of the study since the research has conducted in only a single group participant. In addition, the time given to the intervention was relatively small along the challenges the students faced in practicing it like, weak internet connection, lack of qualified device and lack of technical skill due to the intervention was given for only twenty hours with in one month to second-year undergraduate English Language and Literature Department students, at Woldia University. However, it does not mean that the intervention was completely inadequate since the students practiced on the given Web-based tasks, via Google Docs repeatedly. It is to mean that the findings of the study would have been more convincing if more time to the intervention had been used and situations had been adjusted well in line with internet connection, technological device, and technical skill.

### **1.8. Definitions of Key Terms**

**Academic Writing Performance:** refers to students' ability to write an argumentative essay in terms of Task Achievement, Coherence and Cohesion, Lexical Recourses and Grammatical

Range and Accuracy.

**Critical Thinking Skills:** refer to students' abilities to interpret, analyze, evaluate, infer, explain and self-regulate the given collaborative writing tasks in line with writing argumentative essays at expected level.

**Conventional Collaborative Writing Approach:** refers to the approach that allows students to learn writing skill together face-to-face in the class-room. And it also used to refer a method that teachers commonly used to help students learn together on working on a single writing task in the class-room.

**Web-based Academic Projects:** refers to a method of helping students to learn writing argumentative essays using academic tasks, or activities which were prepared in the manner that are appropriate to work collaboratively using online writing platform specifically, via Google Docs.

**Writing Motivation:** refers to students' interests and preferences towards learning writing skill in terms of the four motivational factors including: self-efficacy, achievement goals, beliefs and affects about writing.

## CHAPTER TWO:

### REVIEW OF RELATED LITERATURE

#### **2.1. Conceptual and Historical Background of Collaborative learning and Collaborative Writing**

##### 2.1.1. Concept of Collaborative learning and Collaborative Writing

Collaborative learning is the base for collaborative writing, and it is defined as a process in which students work together to accomplish a certain task or achieve an intended objective. Lev Vygotsky's Zone of Proximal Development theory is the root of collaborative learning (Vygotsky, 1997). As Vygotsky noted that meaningful learning occurs through active interaction in a social context, in which language plays a central role. This is specifically achieved through the notion of ZPD. It indicates the distance between the learner's actual performance and his/her performance after he/she gets scaffold/support from others. In the theory, the students are perceived as active knowledge constructors, but they require a conducive social environment that allows them to actively interact and communicate with each other. Likewise, Kessler's emphasizes the importance of social interaction in learning. Similarly, Chen (2014) strengthens the idea as knowledge and learning occur through active interaction and communication among students in the community.

Above all collative explanations of collaborative learning, Scholars approached collaborative writing in many ways. Howard (2001), for example, described collaborative writing as an activity in which students collaborate to generate a single written product. According to Ouk-Jeong (2016), it is a style of learning in which students work together to complete a specific writing job. Others characterized it technically as an activity with a shared and negotiated decision-making process and shared accountability for the production of a single text or writing output (Storch, 2013).

In line with defining collaborative learning in general, people use the term collaborative learning interchangeably with that of cooperative learning. But these two approaches are different. Off course, collaborative and cooperative learning approaches were developed under socio constructive paradigm, and they have their own similarities too (Vygotsky, 1997). Their

emphasis on the importance of active learning, the teacher's role as a facilitator, mutually shared experience between students and the teacher in the teaching-learning process, their emphasis on promoting higher-order cognitive skills, and their emphasis on assisting students in taking responsibility for their own learning, including appropriate conditions in which students must communicate ideas in small groups, and their goal in assisting students in developing social and team building skills, are the major similarities between collaborative and cooperative learning (Vygotsky,1997).

Going through their differences, In the case of collaborative learning, there is a belief that students already have the necessary social skills and that they will build on those skills to achieve their goals; students organize and negotiate efforts on their own, and the activity is not monitored by the instructor unless questions are directed towards the teacher, the teacher guides the students to the information needed, and students retain drafts to complete. In the case of cooperative learning, however, students are trained in small group social skills, activities are structured with each student having a specific role, the teacher observes, listens, and intervenes in a group when necessary, and students submit work for evaluation at the end of class, and students assess individual and group performance (Vygotsky,1997).

### 2.1.2. Historical Background of Collaborative learning

Vygotsky sees learning as a social process that is triggered by the Zone of Proximal Development (ZPD) (Dillenbourg, 1999), also known as sociocultural theory. This theory describes how learning is negotiated in respect to the environment and experience with peers from any social connection. Learning is considered as a social concept in sociocultural theory, resulting from an informal link between social contact and an individual's cognitive growth. The interaction defines and structures the learning process (Lantolf and Pavlenko, 1995). The link between Vygotsky's sociocultural theory and learning may be found in the collaborative learning (CL) theory. Working alongside a more skilled individual is said to boost personal growth. Vygotsky arrived at this hypothesis after making several observations. He began by observing that a youngster learns from other individuals in his or her environment. Thus, learning is mediated on a social level. The youngster then internalizes it on an individual level. He or she absorbs and analyzes information from other people and the surroundings. The second is that social learning frequently involves more skilled individuals who teach and guide the less experienced. The knowledgeable 'mentors' might be peers or elder persons. They all

participate in a certain task, and then accidentally collaborate via the process of guiding the less experienced folks. Language serves as "a psychological instrument to manage things, people, and oneself in arranging processes that are fundamental to mental activity" including the learning process from societal to individual levels (Lin, 2015). Language serves as a filter as well as a tool to mediate the learning process.

This viewpoint argues that an individual's development cannot be viewed just through the individual. Social variables, as well as the external environment, affect and influence its growth and should thus be considered. When Vygotsky (1986) observed, learning is "rooted inside social events occurring as a kid interacts among people, things, and events in the environment." As a result of the diverse input gathered, the interaction motivates the cerebral functions to work. Individuals may carry out mental tasks such as thinking, reasoning, and problem-solving when cooperating with peers (Wertsch and Rogoff, 1984).

Interaction among students and between students and the teacher in the teaching and learning process helps students grow and promote their development. It is aided by Vygotsky's (1978) definition of the Zone of Proximal Development (ZPD) as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined by problem-solving under adult guidance or in collaboration with more capable peers." This means that a person has two stages of growth: actual development and prospective development.

Actual development, it may be deduced, relates to the growth of persons that is already attached in their mental context. It might be genetic or self-learning. Individuals at this level learn and work alone, without the assistance of others. On the contrary, potential growth results from the interaction of individuals and their surroundings. The environment here might relate to peers or more experienced adults who collaborated with the persons to complete specific tasks. At this level, the individual is unable to perform autonomously and must rely on others who are more capable. Learning from the expert boosts the possibility for progress since the less competent individual learns from the more capable ones. This is where the collaborative learning process helps students with deficiencies develop with the assistance of their knowledgeable classmates.

This talk emphasizes how Collaborative Learning allows students to obtain fresh ideas from their classmates and so develop mutual engagement in the learning process. The more

beneficial the relationship, the greater development the pupils may achieve. Peer contact is also believed to "increase learners' ZPD and play a crucial function in language learning situations" (Lin, 2015).

### **2.3. The Principles of Collaborative Learning**

The following are some principles of Collaborative Learning which are listed by Lin (2015):

i. Provide more language practice opportunities

CL engages students in the learning process by requiring them to collaborate on a common learning goal. When they converse or exchange ideas with others, they are immediately developing their language skills. This is one of the challenges in the EFL class when students are expected to speak English as a foreign language as the major aim. The situation will be exacerbated if there are more less skilled students than experts. As the instructor tries to convey a certain language focus to the pupils, he or she will need to convert to a traditional learning style. The fact that the students need to practice the language on their own in a specific amount of time will be diminished by the length of time the teacher requires to explain the tough content. Another difficulty is that the more skilled students do not have friends with whom to practice the conversation since the weak students are unable to react to the English discussion in a meaningful way.

ii. Improve the Quality of Student Talk

According to Zang (2010), in standard EFL classrooms, the instructor creates an artificial context for discourse, whereas CL may be created to create a social setting that is akin to real-life situations in the way that language is utilized. It enables students to generate not just in quantity, but also to maximize the discussion by engaging in requesting, clarifying, and bargaining during the CL. Furthermore, as Long and Porter (1985) in Lin (2015) suggest, language adjustment happens in CL-directed learning when students attempt to make themselves understood. As a result, they will strive to help others comprehend what they are trying to convey. They will communicate in a variety of ways in order to guarantee that people listen to and grasp what they are saying. Students are unconsciously conditioned to adopt the suitable language as a result of this.

### iii. Create a Positive Learning Climate

According to Barfield (2003) in Lin (2015), language acquisition involves an emotional and psychological experience to some extent. Thus, if the psychological condition of the learners is disturbed, the learning may not be completed to its full potential. CL creates an environment in which learners feel more at ease and relaxed since there are no tight rules governing how they should learn. Learners are also free to talk about and debate tough aspects of the teacher's curriculum with their peers. This is in contrast to the traditional learning technique, in which students are frightened to make mistakes in speaking because they must talk in front of their peers with perfect and appropriate language and precision. This condition limits students' opportunities to participate in a variety of learning situations that might lead to a more in-depth grasp of specific topics. According to DiNitto (2000), CL "allows for the negotiation of meanings, and therefore the learners' understanding is transformed." Positive emotional situations boost pupils' learning and advance their accomplishments.

### iv. Promote Social Interaction

The contact between learners and their classmates in CL is built via conversation and the sharing of ideas. The conversation takes place in a highly relaxed setting, as learners discuss diverse ideas and perspectives among themselves. According to Jiang (2009), this setting improves learners' language ability as well as their communicative abilities. This also encourages social engagement among learners by having them discuss, question, answer, and organize the learning process.

### v. Allow for Critical Thinking

CL is thought to improve learners' critical thinking skills as compared to individual learning. This occurs when students discuss, clarify, and evaluate their classmates' viewpoints (Lin, 2015). CL, as Johnston, James, Lye, and McDonald (2000) say, promotes critical thinking through the problem-solving process. Learners participate actively in the debate, which encourages them to think critically about the subjects being addressed.

## **2.4. Conceptual and Historical Background of Google Docs**

### 2.4.1. Concept of Google Docs

Google Docs is among the several features of Google like Google Sheets, Google Slides,

Google Drawings, Google Forms, Google Sites, and Google Keep. Google Docs is an online writing platform, it is a free, web-based word processor that serves users to create, share, edit and store documents online. It can be accessed via an internet connection through applauding it as a smart mobile app (on Android and ios) or as a laptop (desktop) app (on Google Chrome os) (MIT Technology Review, 2022). In working collaboratively with the given writing task using Google Docs, users/ learners can gain the opportunity to simultaneously create and edit documents online. The editing process is activated by users through tracing the edits, as a result, the revised detail offers alternatives for the given draft. The position of an editor is emphasized with an editor-specific color and pointer, and a permissions system controls what the user may do. Updates have incorporated machine learning capabilities such as 'Explore,' which provides search results based on the contents of a document, and 'Action items,' which allows users to delegate tasks to other users. In addition, Google Docs supports the standard Open Document format as well as Rich text format, plain Unicode text, Zipped HTML, and Microsoft Word for opening and saving documents (MIT Technology Review, 2022).

#### 2.4.2. Historical Background of Google Docs

Google Docs originated from two separate products Writely and XL2. Writely was a web- based word processor created by the software company up startle and launched in August 2005. It began as an experiment by programmers Sam Schillace, Steve Newman, and Claudia Carpenter, trying out the new Ajax technology and the 'content editable'' function in browsers. On March 9, 2006, Google announced that it had acquired startle. In July 2009, Google dropped the beta testing status from Google Docs. In March 2010, Google acquired Doc Verse, an online document collaboration company. Doc Verse allowed multiple users online collaboration on Microsoft Word documents, as well as others. Microsoft Office formats, such as Excel and PowerPoint. Improvements based on Doc Verse were announced and deployed in April 2010. In June 2012, Google acquired Quick Office, a freeware propriety productivity suite for mobile devices (MIT Technology Review, 2022).

In October 2012, Google renamed the Drive products and Google Documents become Google Docs. At the same time, Chrome apps were released, which provided shortcuts to the service on Chrome's new tab page. In February 2019, Google announced suggestions in Docs, expanding their spell check by using machine translation techniques to help catch tricky grammatical errors (MIT Technology Review, 2022).

### **2.5. Effect of Academic Web-based Projects on Students' Academic Writing Performance**

Currently, the use of digital technology as a pedagogical change tool has resulted in

collaborative and transformative learning through enhanced communication, as well as more relevant and engaging venues for the social development of common knowledge.

Particularly, Google Docs is among the many recent online educational tools that serve in the EFL classroom, especially in the process of collaborative writing, using Google Docs has the following advantages: First, Google Docs provides a collaborative, free, edited web-based space opportunity. This feature allows learners to work together by actively interacting with each other to draft/work simultaneously to make good writing. When students work as a team using Google Docs, they can easily share and combine their ideas with their teammates. Besides learners can also gain skills in writing through commenting on each other. For instance: punctuation, spelling, grammar, ideas of writing, and other writing aspects. Therefore, through all these collaborating and editing processes learners can bring improvement to each writing they work on (Zhou et.al, 2012; Haring &Smith, 1994). Moreover, Google Docs cannot be influenced by time and space. If students do not complete the given writing task/ activity in the classroom, they can work on it at any time and at any place by saving and storing it online. Second, Google Docs allows teachers to make follow up about students' progress in doing their writing tasks. However, assessing only students' final writing work /output does not bring the needed improvement in students writing performance. Students should also be assessed while they are developing/ doing their writing work. Because assessment at the while writing stage enables the instructor to give immediate feedback and constructive feedback on the spot. Hence, in this situation, Google Docs is vital and preferable in achieving this aim (Metilia & Fitrawati, 2018).

Third, Google Docs is easily accessed anytime and anywhere. After students upload the Google Docs application or open the Google Docs from Google directly on their computer or smartphone or standard Web browser like other online collaborative writing tools can use it anytime and anywhere with an internet connection. In this case, time and place do not affect the students' collaborative writing exercise. As a result, learners can develop their writing skills using this online web application writing platform with expanded/ unlimited practice of the skill beyond classroom learning (Metilia & Fitrawati, 2018).

## **2.6. Pre-conditions and Important procedures in using Google Docs to Implement Collaborative Writing**

Preparing the appropriate device, creating a Google account, and getting ready to use the appropriate teaching aid are the basic pre-conditions that are required in using Google Docs for the teaching-learning process (Metilia & Fitrawati, 2018).

The preparation of devices focuses on fulfilling needed resources like desktops or laptops or smartphones and internet connections. Because Google Docs can be accessed via an internet connection with either of the listed devices (Metilia & Fitrawati, 2018).

Creating a google account is a must unless students can't access Google Docs since it is one feature of Google. In doing so, the teacher is responsible for helping students to create and open Google accounts. First, in creating Google account students need a computer with an Internet connection. Second, students have to open the web page <https://accounts.google.com> and then enter the username, password, date of birth, gender, and phone number. Students can also enter their current email addresses as an option. Finally, students press the "Create your account" button, and the account is created. In addition, in opening the google account the teacher must apply the following steps before he/ she let his/her students open their Google accounts: open 'Google', go to Google applications, click on Google Docs, create a new document, name the document( the document name must be clear for the students so that students can easily find it later), share the documents with the students as follow ( click share, insert the Gmail account of students, click 'send'( it is an invitation for students) and click the option ( edit and so on). Then, learners can open their Google account by applying the following steps: (open Gmail account, open Google, choose 'Google Docs' from Google applications, enter email/ password, and open the document (the students will find the teachers document because an invitation was sent to their emails) and then start typing in the document and follow the instructions) (Metilia & Fitrawati, 2018).

Furthermore, the instructor is expected to prepare a media that can aid the teaching and learning process through it can be in the form of text or audio or video, and he/she has to download it on the group link. Hence, the process of employing Google Docs for collaborative writing in teaching writing an argumentative text will be implemented through the following four basic writing stages as it adapted from Metilia & Fitrawati (2018): Planning, Drafting, Editing/Revising, and Publishing.

#### i. Planning

It is the primary and important stage that students implement before they start writing their genuine writing work. In this stage, students observe and discuss the model writing text given by the teacher, attend to the explanation provided by the teacher about the meaning, form, and other features of argumentative text, as well as discuss the topics and write down contents about

them after they are assigned in the group to work.

#### ii. Drafting

In the first place under this stage, students began to compose their first draft alone/ individually on paper after they have discussed the topic with their group mates. In writing the draft, each student in the group writes one topic sentence, and there will be four topic sentences that should be developed into a paragraph.

After all, students have finished their first draft, they are asked to share it with their friends in the group to have the correction. After the first draft has finished, it is to write the second draft on Google Docs on the laptop or other appropriate device. Then, students start writing the second draft by opening Google Docs. Therefore, there are four topic sentences that were developed by four students. For topic sentence 1 is written by student A and developed into a paragraph. After that, student B continues to write topic sentence 2 and so forth.

#### iii. Editing/ Revising

The editing stage is done after all students have finished the second draft. Each student read again the draft, and all students in the group can view, add, edit, and revise various aspects of writing like: (content, organization, vocabulary, language use, and mechanics).

#### iv. Publishing

Each group is supposed to show the final version of the writing to others by using the projector in the class. Another group can read the paragraph and see what edits or changes the group has made and who has made the changes. Finally, the lecturer assesses the final version of group writing. Once the document has been assessed, it can be published by selecting the 'publish to the Web' option under the 'share' drop-down menu. The document can be accessed and seen by anyone anywhere in the world.

### **2.7. Effect of Web-based Academic Projects on Students' Writing Motivation**

Motivation is a necessary ingredient to bring success to students. Lack of students' motivation in class learning has many signals like disruptions, lack of engagement/ participation in class, coming to class unprepared, asking off-topic or inappropriate questions, sleeping or putting the head down in class, and showing up tardy to class (Godzick et al., 2013). In the same way, many scholars acknowledged motivation as the main factor that influences the learning process

in either a positive or negative way. Therefore, it requires working on the methods that increase students' motivation to learn. In line with the research which was conducted by Godzick, et.al (2011) on students' motivation reported that students were motivated and engaged in learning when using a technology-supported learning environment. The study, improved students' motivation and engagement by 9% after the intervention period. In order to increase students' motivation and engagement, teacher researchers implemented a technology-supported learning environment.

Particularly, along with the difficult nature of writing skills, using appropriate media and strategy is the only means to increase students' motivation and interest in learning. However, most of the time teachers use media and strategies that expose students to lose their motivation and interest in helping them to write something. It will also surely affect the outcome of the students writing negatively (Mare & Mare, 2020). As Blankenship & Margarella (2014) claim, ICT (Information Communication Technologies) can be suggested as a successful way of enhancing learners' motivation to write and build different kinds of compositions/ writing outputs. In addition, Halsely (2007) also recognized that all students might not prefer using technology as the best technique, but notes that their enthusiasm will be higher when they know there is a motive behind their writing and posting their works on the internet. The students' motivation and responsibility will keep increasing when they understand that there are real readers who will read their writing works. Therefore, in teaching writing, specifically, using Google Docs in the collaborative learning environment in and out of the classroom is an effective way to encourage/ increase learners' motivation (Zhu, 2012; Kinzer, 2010).

## **2.8. Empowering Critical Thinking Skills through Academic Web-based Projects**

Having cognitive skills is not enough to face challenges with the development of the world today. It is also very mandatory to develop personal and social abilities like critical thinking, creativity, cooperation, and communication (the four C skills). As Yu et.al (2019) the four C aspects of 21<sup>st</sup>-century learning have a significant influence on students' learning. In line with this, the first goal of 4C is to encourage pupils to think critically and solve problems. Of course, in order for pupils to train themselves to analyze and evaluate the information they receive, they must have a critical mindset. With reference to this, the Ethiopian educational curriculum stressed the pedagogical dimension in learning with the aim of improving the ability to high-level thinking (MoE, 2006).

In a society filled with contradictory and difficult judgments, it is critical that individuals develop intellectual talents that allow them to reason through tasks with a meaningful thought. This is accomplished by employing critical thinking as a tool. Critical thinking is a fundamental capacity of human intelligence that is required primarily to discriminate between truth and deception. It assists us in making the best decisions in all aspects of our lives. According to Lyutykh (2009), by using critical thinking abilities, people may better comprehend the structures involved in systematic thinking, which improves the quality of problem-solving in any topic or area of life. In the case of students, critical thinking leads to key decisions in their everyday lives and influences their academic and professional advancement. The word critical thinking refers to purposeful thought that assists pupils in deciding what to believe and how to act. It enables students to explore a topic or issue from several perspectives and come at the best potential solution. It was defined by Scriven (1996) as the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from or generated by observation, experience, reflection, reasoning, or communication as a guide to belief and action. Making smart or educated decisions based on past information, formulating reasoned or logical critiques, considering possibilities, and finally selecting.

It is the ability to objectively examine facts and experiences. Thus, critical thinking may allow us to live a more balanced life by assisting us in recognizing and assessing the elements that impact attitudes and behavior, such as values, peer pressure, the media, and so on. WHO (1994); CBSE (2013) According to Cottrell (2005), critical thinking is not about innate attributes or personality; it is about a specific set of tools for evaluating information in a certain way. As a result, it is learned as a talent. Watson and Glaser (2006) support this notion by stating that critical thinking is a learned talent that requires practice and education. As a result, schools bear a tremendous duty in assisting students in developing their talent for critical thinking. According to Van Gelder (2005), practically everyone believes that one of the primary aims of education, at any level, is to assist students in developing general thinking abilities, particularly critical thinking skills. Critical thinking, according to Mason and Washington (1991), is an important talent that should be applied to all elements of learning. According to Spratt (2005) in Sheir (2014), students must be able to think critically about the resources and information they use in their studies; they must be critical when reading the work of others, and their writing must demonstrate their ability to weigh different arguments and perspectives and express themselves clearly. Furthermore, Damer (2005) asserts in Sheir

(2014) that critical thinking may be utilized to create value deductions based on the information supplied. Based on the facts stated above, Ethiopia's educational curriculum at all levels should incorporate this crucial life skill.

Moreover, as it is explained above as a skill the ability to think critically is not something that we inherited from our parents genetically; rather it requires working in a collaborative setting actively. In addition, facilitating the process of collaborative writing through integrating online technology like using Google Docs helps students to easily develop their critical thinking ability (Smith & MacGregory, 2009). Because Google Docs provides opportunities for learners to think about interrelated issues, and share and negotiate ideas and others. As a result, learners can improve all the sub-skills of critical thinking like: (interpreting, analyzing, evaluating, inferring, explaining, and self-regulate).

## **2.9. Theoretical and Conceptual Framework**

### **2.9.1. Theoretical Framework**

This study was grounded on Lev Vygotsky's social constructivist learning theory, particularly the concept of Zone of Proximal Development /ZPD learning theory. That emphasized the importance of communication and interaction for learning. As Vygotsky's ZPD refers to the gap/ distance between the learner's actual performance and his/her performance after he/she works together with others (advanced learners or knowledgeable adults). Through the process, the students develop thinking skills which in turn leads to advanced/ better learning. In this regard, Vygotsky (1978) has also stressed that each child's individual cultural development appears after it develops at the social level. Therefore, Vygotsky's collaborative learning is the foundation of collaborative writing, where students learn together to accomplish an intended objective, or task or to solve a given problem. In teaching students using a collaborative approach, this study tried to expand the practice to Web-based learning. Specifically, academic Web-based collaborative writing projects particularly, via Google Docs was the main focus of this study. Teaching writing collaboratively using Google Docs makes collaboration much easier by allowing learners to create, share and edit information/documents among members of the group (Chiu, Wang Popescu, Li

& Lav, 2014, P. 150). In addition, it can mitigate problems that happen in line with time limitation that occurs in face-to-face collaboration. Moreover, this web-based collaborative approach allows users to share knowledge from every part of the world with no place and time boundary.

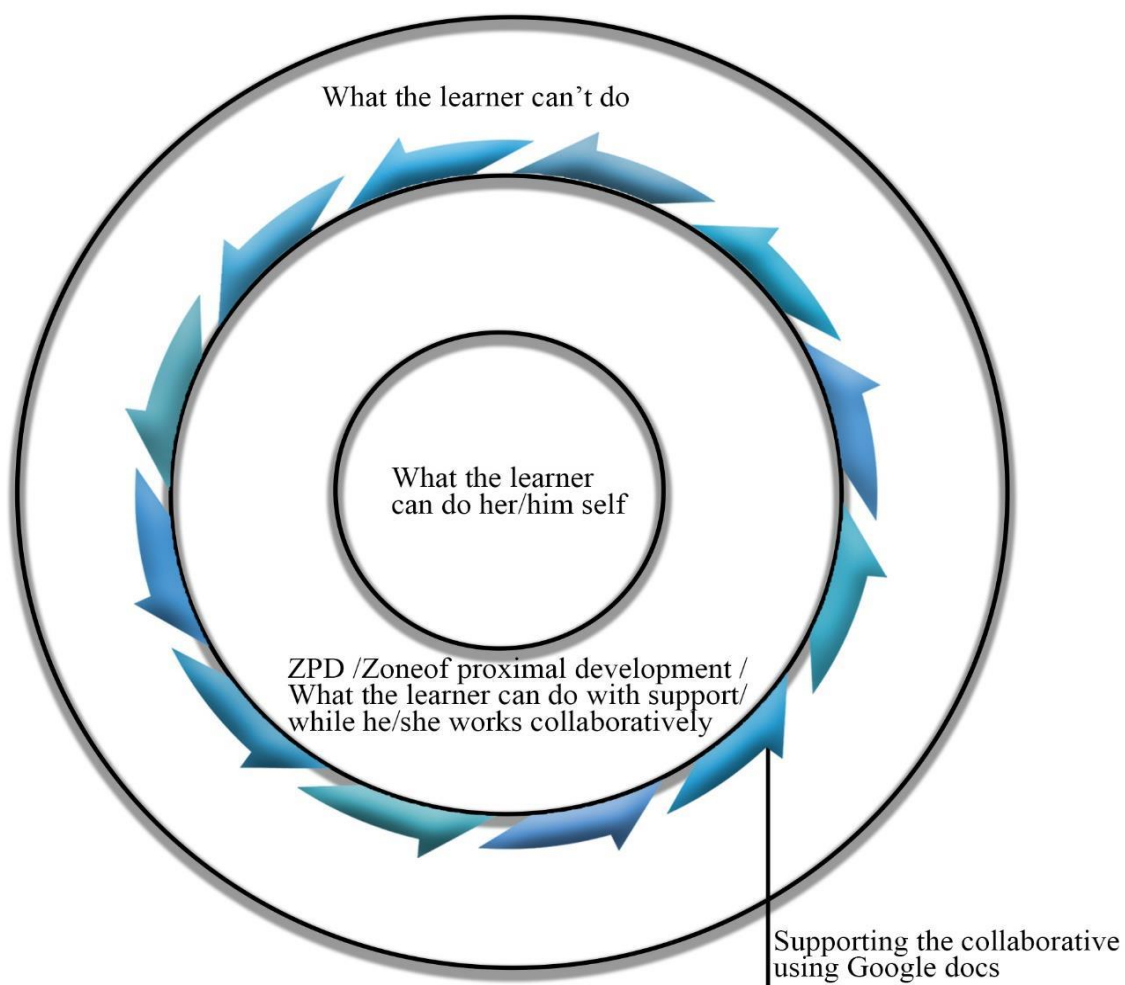


Fig.1. Adapted from ResearchGate GmbH (2008-2022)

Figure one indicates that the learners' ability to work alone will exceed through peer collaboration and facilitating the process using web-based learning using Google Docs.

### 2.9.2. Conceptual Framework

**The concept of this study was collaborative writing using academic Web-based projects specifically, via Google Docs to enhance students' academic writing performance, critical thinking**

skills, and writing motivation.



**Fig 2. Source: Researcher’s own construct 2022**

Figure 2 shows the conceptual framework or the relationship between the independent and dependent variables of the study. The independent variable was academic Web-based collaborative writing projects specifically, delivered through Google Docs, situated in the center. The dependent variables were students’ academic writing performance, critical thinking skills, and writing motivation which are positioned around the independent variable. The anticipated effect of the independent variable (academic Web-based writing projects specifically, via Google Docs) on the dependent variables is shown with arrows pointing toward each dependent variable.

In the current study, it has perceived that the independent variable (academic Web-based projects specifically, via Google Docs) can enhance the learners’ writing performance, critical thinking skills and writing motivation, when learners are given the opportunity to work collaboratively with their peers and supporting the process with the latest online application for writing skill. However, writing through online applications or websites is shown extremely encouraging after a variety experiences and choices for students during the writing practice

(Kinzer, 2010). Therefore, in the present study learners practiced the skill with unlimited exposure using the Web-application beyond the class-room, as result learners can develop the required skills easily. Because, the more they practice the skill, the more they become advanced in their ability to write the given writing task, to think critically about issues in writing, and then they will be more motivated to write/ to engaged in writing activities. From this we can understand that there is clear relationship between the independent variable and the three dependent variables which are shown above in the figure. Hence, the present study was intended to show this through investigating the effects of academic writing projects using Google Docs on students' writing performance, critical thinking skills and writing motivation in EFL context.

Moreover, from above the figure also can infer that there is noticeable and theoretically supported relationship among the three independent variables. For instance, when learners are motivated to learn, at the same times their ability to write something and to think critically can also increase, and vice versa. Nevertheless, it is not the focus of this study to investigate the relationship among the dependent variables.

## **2.10. Previous Research Works on Using Online Technologies with Collaborative Writing**

It is important to go deep in to various research works and reinvestigating further in different time and place contexts in order to bring the needed change in the education system. Therefore, in this review literature section, some previous research works that have direct linkage with teaching writing in collaborative environment using Google Docs are presented:

One of the studies was conducted in Indonesia on private secondary school students to investigate what students think about utilizing Google Docs for collaborative writing in English class. As a result, students' enthusiasm, digital literacy, social skills and writing skills improved when they use Google Docs for collaborative writing. Students on the other hand, experienced some difficulties in terms of internet connection, the availability of accompanying gadgets, and their own abilities (Sa'diyah & Nabhan, 2021).

Similarly, the research by Hidayat (2020) explores students' view of using Google Docs in facilitating and supporting pedagogical practices in writing course at the tertiary level. The findings showed when students wrote using Google Docs, mostly the students feel it helps the students to improve my teamwork and discussion skill. And, also it makes the students easier to communicate and interact with my lecturer than a face-to-face interaction in the classroom.

And for the learning experience, as online platform, it contributes to unique experiences for students.

Beyond what students think and view about Google Docs in using it for teaching writing in collaborative environment, the qualitative study which was conducted by Vens (2010) determines the suitability of Google Document as a collaborative writing environment for students. After the application is evaluated against the criteria which were developed from the review literature by the researcher and from the triangulated data which was obtained from students using interview. The findings suggest that Google Documents, with little exception, is an appropriate collaborative writing environment for students. The research came to this determination following the synthesis of 2 things: the result of seeing how well Google Documents met the standard of the Essential Collaborative Writing Toolkit, and students' impressions.

In addition, the case study by Damayantie et. al. (2020) focused on how six senior high school students can be supported to write collaboratively using Google Docs, and identified the type of feedback provided by the students during the collaborative writing activities. The results of the study indicated that the use of Google Docs supported the students' collaborative writing and peer feedback practices. Features available in Google Docs that were frequently used by the students are chat room and comment. These features were particularly useful for generating ideas, organizing the text structure, and constructing sentences.

More specifically, the research by Suwantarathip and Wichadee (2001) focused on comparing the writing abilities of students who collaborated on writing assignment assignments using Google Docs with those working in group in face-to-face classroom. The results indicate that a significant difference was found between the two groups writing mean scores than those working in group in face-to-face classroom. In addition, students reported that they had positive attitude towards collaborative writing activity

In more generalized sense, the research conducted by Alharbi (2009) indicated that Google Docs could facilitate writing instructional practices, especially for collaborative writing activities.

## CHAPTER THREE

### RESEARCH METHODOLOGY

This chapter presents the research methodology that was employed in the study. Hence, those common elements such as the research method including the research paradigm and approach, design of the study, data gathering instruments, participants of the study, data gathering instruments, data collection procedure, explanations about the intervention, data analysis techniques and ethical considerations are treated in separate sections.

#### **3.1. Research Methods**

##### 3.1.1. Research Paradigm of the Study

The pragmatism research paradigm was applied in this study since it allows the researcher to conduct the study through making emphasis on practical consequences, and real-world application of ideas and theories, as well as making a focus on utility of research findings and encourages multiple methods to address complex problems (Creswell et al., 2018). The pragmatism research paradigm ontologically, epistemologically, and methodologically is characterized by its focus on practical implication, dynamic realities, and a commitment to using diverse methods to explore complex issues respectively. Accordingly, in the current study, the practical effects of Web-based academic projects were investigated through applying both qualitative and quantitative research methods in relative with social constructive paradigm particularly, ZPD learning theory to address EFL students' writing difficulties.

##### 3.1.2. Research Approach of the Study

As Denzin (1978) using a mixed research method enables researcher to enhance the credibility and validity of results by integrating both quantitative and qualitative data. In addition, Creswell (2014) and Creswell Plano Clark (2018) noted that a mixed research approach was used to explore a research issue under investigation from multiple perspectives, combining quantitative and qualitative data to provide a more comprehensive understanding of a phenomenon being studied (Creswell, 2018). Thus, although the quantitative data was largely used in this study, the qualitative data was also employed to collect data about the learners' experiences in working on Web-based academic projects using Google Docs since it allows

the researcher to obtain in depth data to quantitative findings by explaining the why and how behind the numerical data. Therefore, the study was conducted through applying a mixed research approach.

### **3.2. Design of the Study**

The study design was quasi-experimental/ single subject experiment that employs a time series design with single group participants. This design was chosen to investigate the effects of academic Web-based writing projects via Google Docs on students' academic writing performance, critical thinking skills and writing motivation since it allows to recognize effects of the intervention/ academic Web-based writing projects in a group of participants through mitigating data contamination that happened between or among groups, and controlling other extraneous variables that influence the study (Matowe et al., 2003). Hence, in this study, a single group quasi-experimental design was employed to investigate the effects of academic Web-based writing projects on students' writing performance, critical thinking skills and writing motivation.

In addition, as Matowe et al. (2003) noted, time-series design involves repeated assessments before and after the intervention. Principally, in interrupted time series analysis, it allows the researcher to establish a baseline for comparison through providing multiple assessments to the participants about the dependent variables before the manipulation of the treatment variable/ independent variable. Then, the treatment variable was followed by additional assessment of the dependent variables to determine whether or not the intervention altered the baseline of dependent variables. Therefore, in doing so, in the current study, the participants were given a series of essay writing pre-tests before the intervention of academic Web-based writing projects using Google Docs, and other similar series of essay writing post-tests. As a result, the results that were obtained from the pre-tests and post-tests indicate the effects of academic Web-based writing projects using Google Docs on EFL students' academic writing performance and critical thinking skills

### **3.3. Participants, Sample, and Sampling Techniques**

In the main study, a total of 35 (30 male and 5 female) second year English major students who were enrolled in advanced English course, at Woldia University were selected using purposeful sampling method since these students are highly attached with the issue under

investigation, and there was only one English major section who took this writing course in the University. Then, all these students in this section were taken using comprehensive sampling as participants of the study since their number was manageable to do so. Besides, conducting the study through considering gender issue was impossible, because majority of the participants were male. Therefore, gender aspect was not the focus of the current study.

### **3.4. Data Gathering Instruments**

Gathering data with different alternative tools increases the authenticity of the information obtained and triangulation of information possible during data analysis (Richards, 1994). Accordingly, five data collecting instruments that are tests, questionnaires, textual analysis, students' diary analysis and focus discussion were used to collect data on student's academic writing performance, critical thinking skills and writing motivation.

#### **3.4.1. Test**

Pre-tests and post-tests were used to gather data on students' writing performance and critical thinking skills. Therefore, three consecutive argumentative essay writing pre-tests were administered to understand the students' existing writing performance and critical thinking skills. Likewise, other three consecutive argumentative essay writing post-tests were also administered after the intervention to determine the effects of the treatment, whether or not students' writing performance and critical thinking skills were improved. In other words, a total of six argumentative essay writing tests were given to the students with in four days interval between each test. The tests were developed by teacher researcher through considering the students' local context and their background knowledge. Likewise, the tests were administered to the participant students by the researcher (see appendix A-F). Argumentative essay writing was preferred over other essay writing types in the current study because it was found appropriate to investigate learners' writing performance, critical thinking skills and writing motivation in online collaborative environment. It is also scholarly suggested that critics of arguments in online learning environment can maximize learners' knowledge construction (Zue, 2012). Accordingly, the tests were subjective type in nature which made students to write six consecutive argumentative essays with guided instructions including topics for their writing. Therefore, students in each test were expected to write one

completed argumentative essay which incorporated introduction, body and conclusion sections with in five paragraphs, and 250, or over 250 words based on the given argumentative topic.

The students' essays were scored using two rubrics that focus on academic writing performance and critical thinking skills. The writing performance rubric used to evaluate the students' argumentative essays were adapted from British Council International English Language Testing System (IELTS) Writing Tasks-2 descriptor (2018) that incorporated Task achievement, Coherence and Cohesion, Lexical Resource, and Grammatical Range and Accuracy. The IELTS Writing test criteria were used to make the evaluation process more standardized. Besides the critical thinking skills rubrics were adapted from Facione (2015), "Critical thinking: What It Is and Why It Counts (from American Psychological Association (APA) Report: Expert Consensus Statement on Critical Thinking) incorporating common critical thinking skills including interpretation, analysis, evaluation, inference, explanation, and self-regulation. The rubric was a four-point scale from one to four that refers to poor, good, very good, and excellent. In the assessment process, 2 experienced EFL teachers were participated by marking students' argumentative essay independently based on the given criteria. Training on the use of the rubrics was given to the raters. Besides, inter-rater reliability was calculated for the raters. Finally, before the tests were administered to the students, the validity of the test was checked by concerned experts along with the two supervisors. In addition, Person's correlation (Person's,  $r$ ) reliability test was conducted to test the reliability of the tests in order to make the necessary modification based on the results. As a result, the value of  $r$  in academic writing performance =.86, and the value of  $r$  in critical thinking skills  $r$ =.81 which imply the items internal consistency were very good and no need of making further modification on the instrument.

#### 3.4.2. Questionnaire

A questionnaire was used to gather data on students' motivation towards academic writing. It incorporates 24 items among which ten of them pertain to self-efficacy, five achievement goals, five beliefs about writing, and the rest five were affect about writing. According to MacArthur et al. (2016) these are the main aspects of motivation, and the questionnaire was adapted from it. The items were a five-point Likert type ranging from 'strongly agree'- to - 'strongly disagree'. This questionnaire was distributed before and after the intervention. Prior to

intervention the questionnaire was administered to understand students' existing motivation towards academic writing. The post-intervention questionnaire was used to see if there were changes in students' motivation towards writing. Before the questionnaire was administered to the students, its content validity was checked and approved by concerned experts along with the two supervisors. Besides, pilot study was conducted before the main study with students out of the target group at Bahir Dar university. Then, using the pilot study data, Cronbach Alpha test was calculated in order to check the internal consistency of the questionnaire items. Accordingly, the value of (r) in self-efficacy=.74, the value (r) in achievement goals=.79, the value of (r) in beliefs about writing=.82, and the value of r in affect about writing=.91. which indicated that almost all the questionnaire items were internally consistent except two items under the efficacy category and one item in achievement goal category. As a result, necessary and minor modifications were made on the inconsistent items accordingly before the questionnaire was distributed for the main study participants at Woldia university (McMillan & Schumacher, 1997). (see appendix - G).

#### 3.4.3. Textual analysis

Textual analysis was made on students' written essay to obtain further evidence regarding the effects of collaborative writing using Google Docs on students' writing performance and critical thinking skills. It was also used to gather information on learners' experiences in working on Web-based academic projects via Google docs as a supplement to the statistical findings presented on the students' writing performance and critical thinking skills. Therefore, sample pre-test and post- test argumentative essays which were written by students were randomly chosen and analyzed. The textual analysis that focused on students writing performance was made using British Council International English Language Testing System (IELTS) writing task descriptor (2018). The IELTS Tasks-2 writing descriptor had four scales under nine bands. The four scales were Task Response, Coherence and Cohesion, Lexical Resources, and Grammatical Range and Accuracy. On the other hand, the textual analysis that focused on critical thinking skills were made based on the core critical thinking skills identified by American Association Expert Consensus. Hence, the core critical thinking skills recognized by experts are interpretation, analysis, evaluation, inference, and explanation (Facione, 2015).

#### 3.4.4. Students' diary analysis

It was used to collect data about participant students' daily feelings, thoughts and experiences (Donyaie & Afshar, 2019). Therefore, this instrument, in this study was used to collect data about students' daily feelings, thoughts and experiences about Web-based collaborative writing instruction using Google Docs. This instrument was used to strengthen the data gained by other instruments including test, questionnaire and textual analysis regarding students' academic writing performance, critical thinking skills and their writing motivation. The students' diary analysis was administered throughout the intervention per each session to gain data on students' reaction while working on Web-based collaborative writing tasks using Google Docs. Thus, a checklist was designed to guide students' reflection about the effectiveness of the daily lesson, and ways which should be improved.

The students' diary analysis focused on the effectiveness of students' ways of learning writing skill, students' motivation towards academic writing, effectiveness of Google Docs in collaborative writing approach, students' feeling on their capability to accomplish writing tasks, the contribution of the writing tasks using Google Docs on their critical thinking skills and writing performance, the major problems encounter in collaborative writing using Google Docs in writing classes, and the measures which were taken to alleviate the problems encountered during the process. Before the students' diary analysis was administered to the participants, its validity was tested by concerned experts along with the two supervisors as the researcher done with the other data gathering instruments (see appendix - H).

#### 3.4.5. Focus group discussion

Focus group discussion (FGD) was employed to gather a qualitative data on students' academic writing performance, critical thinking skills, and their motivational towards writing, which in turn used to collect the learners' overall experiences in working on Web-based academic projects using Google Docs. Hence, the focus group discussion contained seven open ended questions which focused on learners' general feelings and experiences in line with the effect of the intervention (academic Web-based projects using Google Docs) on their writing performance, critical thinking skills, and motivation towards writing. Therefore, in conducting the FGD properly, first the validity of the items incorporated in the FGD guide was checked by concerned experts and supervisors in terms of its contents and language clarity according

the aim of the study. Then, it was administered with participant students after the intervention by organizing them in to four groups, which each group comprises (8-9) members (see appendix I).

### **3.5. Data Collection Procedure**

This study employed a series of steps to collect data. First, the data collection instruments including test, questionnaire items, focus group discussion and students' diary analysis items were developed. Next, all the items of the data collection instruments and the teaching manual were commented by experts and the necessary modification were made. Then, the teaching manual was prepared to guide the intervention. Following this process, all the data gathering instruments and the teaching manual were piloted with English major students taking advanced writing English course at Bahir Dar University, during the second semester in 2015 E.C. After running internal consistency analysis on the pilot data, the necessary modifications were made to data gathering instruments. Finally, the main study was conducted at Woldia University, during the first semester in 2016 E.C.

In the main study, second year English major students taking advanced English course at Woldia university participated. In doing so, first, the participants were given a pre-intervention. questionnaire to determine their existing motivation towards writing. Following this questionnaire, three consecutive argumentative essay writing pre-tests were administrated to identify the students' critical thinking skills and writing performance before the intervention. Next to the completion of pre-tests, the intervention was given by the course teacher for twenty hours or around a month. When the intervention was given, the students' diary analysis was collected from students throughout the intervention per each session

Following the intervention, participant students were taken three consecutive post-test essays and completed a post-intervention questionnaire. The post-tests were similar to the pre-tests, but not exactly identical. The post-intervention questionnaire was the same as to pre-intervention questionnaire. The post-tests were used to gather data that aimed at assessing whether the intervention, or academic Web-based projects enhance students' academic writing performance and critical thinking skills. As well as, the post-intervention questionnaire was employed to collect data that intended at examining whether the intervention, or academic Web-based projects increase students' motivation towards writing. Finally, the data was analyzed using

both quantitative and qualitative methods based on the nature of the data.

### **3.6. The Intervention**

The intervention in this study was Web-based academic projects, or Web-based collaborative writing tasks which was specifically delivered using Google Docs for around 20 hours. The intervention was guided by the teaching manual which was prepared by the teacher-researcher. The tasks were prepared in the manner which was appropriate for Web-based learning, and used in order to teach students writing argumentative essays. Accordingly, the teaching material was prepared including two major sections which included contents about a general overview of an essay, and an argumentative essay in particular. Therefore, in the teaching learning process, participant students were engaged in the tasks incorporating discovering their own writing topics through producing a complete essay with effective collaborated work among their group members by beginning in participating on brain storming activities about an essay as a whole.

The students performed their writing activities in small group after they registered as member using their Gmail account. Then, they could share information and work together on the tasks like that of groups which were created using telegram and other Web applications. In implementing the intervention, first, training was given for students and the course teacher on how they use Google Docs to do collaborative writing tasks by concerned ICT expert along with the teacher-researcher. Accordingly, students and the course teacher practiced working on collaborative writing tasks using Google Docs. Hence, in using Google Docs for teaching learning process, preparing appropriate device, creating a Google account, and getting ready to use appropriate teaching aid are basic pre-conditions. The preparation of devices focuses on fulfilling the needed resources like: desk top, or lap top computer, or smart phone and internet connection since Google Docs can only be accessed with internet connection in either of these devices. Creating a Google account is a must unless students can't access Google Docs since it is one Google feature. The teacher is responsible for helping students to create and open Google accounts. In doing so, first, the students need a computer with internet connection. Second, students have to open the Web page <https://accounts.google.com>, and they enter the user's name, password, date of birth, gender and phone number. Students also can enter their current email address as option. Finally, students press the "create your account" button and the account is created. In addition, in

opening the Google account the teacher must apply the following steps before he/she let his/her students to open their Google account. First, open Google. second, go to Google application. Third, click on Google Docs. Forth, create a new document, and finally, name the document, and the document name must be clear for students so that they can find easily later. To share the document with students, first, click “share”. Second, insert the Gmail accounts of students. Third, click “send” which is an invitation for students. Forth, click the option “edit and so on”, and then the learners can open their Google account by applying the following steps. First, they open Google account. Second, they open Google. Third, they choose “Google Docs” from Google applications. Fourth, they enter email, or password. Fifth, they opened the document and they will find the teacher document, because the invitation was sent to their emails. Finally, they start typing in the document following the instruction. Further, the instructor is expected to prepare a media that can aid the teaching and learning process through it can be in the form of text, or audio, or video, and he/she has to download it on the group link.

In the teaching learning process, or during intervention, starting from the beginning through end students passed through five writing stages: (Planning, Drafting, Revising or Editing, Interactive writing work shop and Final submission or presentation). In the planning stage, the teacher created a shared Google Docs where students collaboratively brainstorm ideas for their essays and have students to work on it. Students conducted the collaborative brain storming activity about general over view of an essay, and argumentative essay including assigning a topic, contributing ideas, key words or relevant quotes in real time. In the drafting stage, students worked together to create an outline and draft of their essays using Google Docs based on the guiding templates involving (introduction, body paragraph, conclusion). The teacher ensured whether they understand the structure of an essay and encouraged peer review after each stage by setting deadline for each section. In the revision and editing stage, the students made a peer review through sharing drafts with assigned partners using the commenting feature to provide constructive feedback on content, organization, grammar and style. They conducted it through establishing guidelines for effective feedback. After receiving feedback, they made revisions directly on the document. While the teacher encouraged them to track changes, or highlight edits so that peers saw how their suggestion incorporated. In the interactive writing workshops stage, the teacher conducted writing workshops where students share their screen and discuss their essays in real time through

organizing small groups where students present their essays and receive live feedback from their peers and instructor. In doing so, they used the chat feature for additional comments when necessary. Finally, in the submission or presentation stage, students submitted their final essays using Google Slides linked to their documents for a more interactive experience.

### **3.7. Data analysis method**

Both quantitative and qualitative data analyses techniques were employed depending on the nature of the data which was gathered using both quantitative and qualitative data gathering methods respectively.

The quantitative or statistical analysis was more of inferential. Therefore, one-way repeated measures Multivariate Analysis of Variance (MANOVA) was used to analyze data which was gathered through tests in order to find out the effects academic Web-based projects via Google Docs (independent variable) on EFL students' writing performance and critical thinking skills (dependent variables). Because, as Hinton, et., al. (2004), we use one-way repeated measures (MANOVA) to analyze the effect one independent variable on two or more dependent variables in a single group study. Paired sample t-test was also employed to analyze data which was collected using questionnaire to examine the effects of academic Web-based projects using Google Docs (independent variable) on EFL students' writing motivation (dependent variable) through comparing the students' writing motivation before and after the intervention. The statistical analysis was conducted using the latest SPSS/ Statistical Package for Social Sciences (Version 29), and all statistical tests were significant at a p value of .05.

On the other hand, the qualitative data that was collected using textual analysis, FGD and students' diary analysis in order to gather data that helps to triangulate the information that was gathered through tests and questionnaire was analyzed using thematic analysis. Therefore, the analysis was directly aligned with contents which used as rubrics for the tests in order to analysis the students' writing performance and critical thinking skills in writing before and after intervention. It was also linked with contents presented in questionnaire items in order to analysis students' motivation before and after intervention. Hence, the whole qualitative analyses were presented through word narration parallel to the statistical analysis under each dependent variable accordingly.

### **3.8. Ethical Consideration**

This study was conducted through taking necessary ethical considerations in to account like: voluntary participation, taking care not to harm participants, respecting their privacy, and being genuine in practice. At the onset of the research, first of all the participants were informed about the purpose of the study. Accordingly, participants were provided with the opportunity to engage in the research based on their feeling independently without any pushing factor. Besides, the participants were informed about the contribution of the study in developing EFL students' writing performance, critical thinking skills and their motivation towards writing skill so that all participants take part in the study voluntarily.

Taking care not to harm participants through exposing them to feel uncomfortable in whatever kind of means is other basic ethical consideration was implemented in this study. Therefore, in the process of conducting the study, being abstained from providing blenching feedback can be an example for this since what student write is visible online for all participants in the group and the instructor too, and which in turn leads them to decrease their participation in the given collaborative writing tasks.

Anonymity and confidentiality of the given information concerning recordings and data were ensured. In doing so, participants were not asked to write and tell their names on the data sheets and recordings. So, they can provide their responses without restriction independently because their privacy was not exposed to others/ outsiders.

In addition, participants were not abused materially, technically and psychologically in the research process. For that, the researcher made the environment conducive for all participants in developing the intended skills using the intervention. Therefore, in doing so, first the researcher ensured whether all participant students have the necessary tools like smart phone, personal computer and among others to engage in the intervention process, and adjusting alternatives using desktops which were found in English language laboratory in the university for those who did not have their own personal computer and smart phone. Then, the participants were provided training on how to use Google Docs to do collaborative writing tasks before the intervention by concerned experts along with researcher. Thus, participants were safe both materially and technically which in turn leads them to feel psychologically comfortable in the research process.

Finally, all works that were taken as a source in this study were cited and acknowledged carefully. Moreover, facts and opinions were identified; as well everything that was stated in the study was in correspondence with principles of scientific investigations.

### **3.9. A Brief Report of the Pilot Study**

In this study, pilot study was conducted for different purposes like to check if the research design that was proposed could be implemented the way it was planned, and to check as to how the data gathering instruments were valid in terms of content and language qualification. Besides, it was needed to check the reliability of the data gathering instruments. Similarly, as McMillan and Schumacher's (1997) noted pilot study was used to assure the reliability and validity of data- gathering instruments. It involves small-scale testing of the data collection instruments, data analysis techniques, and procedures that the researcher plans to use in the main study. Therefore, the data gathering instruments in this study including test, questionnaire, focus group discussion, students' diary analysis focus group discussion and the teaching material were piloted.

The pilot study was conducted at Bahir Dar University, which is a different site from the main study in order to mitigating data contamination. In doing so, 13 second-year undergraduate English Department students enrolled in advanced writing skills course participated in the study. The intervention of the pilot study was given for 20 hours by the researcher. In addition, in order to assess the internal consistency of items in the instruments, reliability analysis was calculated. For instance, the value of (r) in self-efficacy=.74, the value (r) in achievement goals=.79, the value of (r) in beliefs about writing=.82, and the value of r in affect about writing=.91. which indicated that almost all the questionnaire items were internally consistent except two items under the efficacy category and one item in achievement goal category. As a result, the necessary and minor modifications were made on the inconsistent items in terms of replacing some ambiguous explanations and terms with appropriate ones accordingly before the questionnaire was distributed for the main study participants. Once the reliability and validity matters were maintained, the main study was conducted at Woldia University.

### **Lessons Learned from the Pilot Study**

Standing from the findings of the pilot study, some important measures were taken to increase the clarity of instruments like: avoiding unnecessary and repeated explanation, adding further explanations on some items for better understanding, some explanations and words replaced by other easily understandable words and explanations. Some items were fully improved in the manner that fit the research objective and students' level of understanding. For instance, in developing tests for students to write an argumentative essay among the six written essay tests two of them seemed very challenging and inappropriate to write argumentative essay with reference to the students' level of understanding and background experience. Therefore, the necessary modifications were made based on supervisors and expert valuable comment through replacing the tests with other appropriate tests that fit students' level of understanding and background knowledge in terms of content and language clarity. Besides, providing clear instruction through adding necessary background information in simple language was the other action done to maximize the clarity of instruction based on the given comments on the tests. For example, at the beginning, in pre-test two students were only given the following instruction to develop their essays. "There are some communities who believe that "Female's genital circumcision should be constitutionally supported and executed to produce well-disciplined generation". What do you think about this issue? Write an argumentative essay using over 250 words arguing for or against this view." But later, based on the supervisors and expert valuable comments, the test was develop adding the following coated contents as instruction, and some contextual explanation in order to more clarify the argumentative issue for the students. "NB: Your essay needs to have an introduction, body and conclusion." "There are Ethiopian parents who force their female children to go through genital circumcision. They believe that implementing this practice protects them from engaging in overly active behaviors which are considered unacceptable by the society, such as breaking house hold equipment, mis-trusting their husbands before or after marriage and so on. As a result, some members of the community believe that "Female's genital circumcision should be constitutionally supported and carried out in order to produce well-disciplined generation" What is your reaction towards this view? How? Provide adequate reasons or justifications for your stance. Write a five-paragraph essay of 250 or more words."

In addition, in terms of using the accurate language structure, all instruments from the beginning through end were checked by language experts. As a result, some language structures were revised accordingly. Particularly, in translating the FGD and students' diary analysis items from English to Amharic, all the items were revised again in the manner that fits the

research purpose after the items were translated using the Google translator and pass through language experts. For example, the sentence structure in English language in active sentence follows a Subject-Verb-Object flow, but it is different in Amharic language since it follows a Subject-Object-Verb rule. Accordingly, revisions were made for incorrectly organized sentences and questions which occurred in translating the items from English in to Amharic language, because the Google translator made many of them as there are the structure in English sentences. This in turn was negatively influenced the purpose of the study through creating mis-understanding on the messages which intended to be transferred using the items in the instruments among participant students. Hence, it was found important to make revisions accordingly.

Moreover, using results of the reliability test from the pilot study, the necessary modifications were made for two of the items presented to measure students' motivation towards writing. Modifications were also made to the teaching material since there were some confusing instructions and model essays. For example, instructions given to write essays based on the real-life context were not clear, later it became clear while it was modified. In addition, further real-life model texts were also added into the teaching material. So, the teaching material was better detailed, and illustrations were also added so that the student could understand it. The model texts presented in the teaching material under the titles "Ten Work Culture: Opportunities and Challenges in Balancing Work and Education" and "Benefit of Gender Segregation During Adolescence: A focus on Developmental Challenges" can be very good indicators for this (see appendix-J) Overall, for the researcher, conducting the pilot study helped to check the instruments and to see the teach-ability and manageability of the writing projects.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

This chapter includes two major sections. These are the results and discussion of the collected data. Therefore, in the first part (4.1) the data which were gathered using tests, questionnaires, textual analysis, students' diary analysis and focus group discussion on the effects of academic Web-based projects using Google Docs on EFL students' academic writing performance, critical thinking skills and writing motivation were presented respectively. In the second section (4.2), results of the study were discussed with other related research findings.

#### **4.1. Results of the Study**

##### 4.1.1. Writing Performance and Critical Thinking Skills

This section presents the results on the effects of academic Web-based projects using Google Docs on students' writing performance and critical thinking skills. The data which were gathered through essay writing tests, focus group discussion, and students' diary analysis are presented respectively. Besides, sample textual analysis is presented in this section

##### 4.1.1.1. Tests results on Students' Writing Performance and Critical Thinking Skills

This sub-section presents the students' pre- and post-tests results which were given in order to measure their writing performance and critical thinking skills. As it was explained in the methodology section, students were taken a total of six similar but not the same series of argumentative essay writing tests, particularly three pre-tests before the intervention and three post-tests after the intervention. Accordingly, after the results were analyzed using *one-way repeated measures Multivariate Analysis of Variance (MANOVA)* and the findings are explained in the next page.

**Table 1: Descriptive Statistics: Students' Test Scores before and after the Intervention**

Test	Mean	Std. Deviation	N
Writing Performance Pre-test 1	41.17	15.924	35
Writing Performance Pre-test 2	43.26	15.166	35
Writing Performance Pre-test 3	43.89	18.238	35
Writing Performance Post-test 1	46.37	12.192	35
Writing Performance Post-test 2	51.43	16.912	35
Writing Performance Post-test 3	55.74	11.382	35
Critical Thinking Skills Pre-test 1	41.23	17.247	35
Critical Thinking Skills Pre-test 2	41.54	14.364	35
Critical Thinking Skills Pre-test 3	43.46	15.644	35
Critical Thinking Skills Post-test 1	43.86	13.412	35
Critical Thinking Skills Post-test 2	49.09	16.600	35
Critical Thinking Skills Post-test 3	54.14	12.774	35

The descriptive statistics result presented in *Table 1* shows the potential differences of the students test scores for both writing performance and critical thinking skills before and after the intervention. The *mean* and *standard deviation* of the students' writing performance test results respectively before the intervention were 41.17 and 15.924 for pre-test 1; 43.26 and 15.166 for pre-test-2, and 43.89 and 18.238 for pre-test 3 which suggest that the results insignificant differences in test results across the pre-intervention test occasions.

Likewise, the post-test sore *mean* and *standard deviation* of the students' writing post-test

respectively were (post-test-1,  $M = 46.37$ ,  $SD = 12.192$ ; post-test-2,  $M = 51.43$ ,  $SD = 16.912$ , and post-test-3,  $M = 55.74$ ,  $SD = 11.382$ ) which indicated that the results have no significant differences. From these test results, we can understand that the students' *mean* scores in the pre-tests were similar though there were some improvements. Likewise, even though there were some improvements, the students' *mean* scores in the *post-tests* were also similar. However, when the *mean* scores in the pre-tests and post-tests were compared, they have significant differences in favor of post-test scores. In other words, the students' *mean* scores in the post-tests were higher than those of the pre-tests. It implies that the students' writing performance has been improved after the intervention of academic Web-based projects via Google Docs.

In the same manner, the table also showed that the students' critical thinking skills results before the intervention (pre-test-1,  $M = 41.23$ ,  $SD = 17.247$ ; pre-test-2,  $M = 41.54$ ,  $SD = 14.364$ , and pretest-3,  $M = 43.46$ ,  $SD = 15.644$ ) were comparable. Similarly, the students' critical thinking skills post-test *mean* scores on three occasions (post-test-1,  $M = 43.86$ ,  $SD = 13.412$ ; post-test -2,  $M = 49.09$ ,  $SD = 16.600$ , and post-test -3,  $M = 54.14$ ,  $SD = 12.774$ ) were also similar each other. Thus, the critical thinking skills results indicated that the students' *Mean* scores in the pre-tests have no significant differences though there were some improvements among the pre-tests. Likewise, the students' *mean* scores in the *post-tests* have no significant differences though there were some improvements among the post-test results. However, when the *mean* scores in the pre-tests and post-tests were compared, they have significant differences. In other words, the students' critical thinking skills post-test results *mean* scores were higher than those of the pre-tests. The results, therefore, indicated that the students' critical thinking skills have been improved when they worked on academic Web- based projects/ using Web-based collaborative writing instruction via Google Docs in their writing classes.

Overall, we could observe that the writing performance post-test *Mean* scores were greater than the pre-test *Mean* scores. Similarly, the critical thinking post-test *Mean* scores were greater than the pre-test *Mean* scores. As the two sets of students' scores (writing performance and critical thinking skills) were measured on different rubrics, it is inappropriate to compare the writing performance and critical thinking skills scores. However, it can be summed up that the intervention given to the students made differences in both writing performance and critical thinking skills post-test *mean scores*. Thus, it is possible to understand that the academic Web- based projects using Google Docs has had positive effects on the students' writing performance and critical thinking skills.

**Table 2: Multivariate Tests: Effects of AWP/ academic Web-based projects via Google Docs on WP and CTs, together**

Effect		Value	F	Hypoth	Error	Sig.	Partial	Noncent.	Observe
				esis df	df		Eta	Parameter	d Power <sup>c</sup>
							Square		
							d		
Within	Pillai's	.783	9.013	10.000	25.000	.000	.783	90.130	1.000
Subjec	Trace		<sub>b</sub>						
ts	Wilks'	.217	9.013	10.000	25.000	.000	.783	90.130	1.000
AWP	Lambda		<sub>b</sub>						
using	Hotelling's	3.605	9.013	10.000	25.000	.000	.783	90.130	1.000
Googl	Trace		<sub>b</sub>						
e Docs	Roy's	3.605	9.013	10.000	25.000	.000	.783	90.130	1.000
	Largest		<sub>b</sub>						
	Root								

a. Design: Intercept

Within Subjects Design: Google

b. Exact statistic

c. Computed using alpha = .05

The main finding of the MANOVA test result is shown in the *Multivariate Tests, Table 2*. The important information in the *Multivariate Tests* result is the Wilks' Lambda test statistic. As it can be seen in the table, the Wilks' Lambda test statistic is significant ( $p < 0.05$ ), which would indicate that overall, there was a significant effect of academic Web-based projects using Google Docs on both dependent variables (writing performance and critical thinking skills). In other words, there was a significant effect of academic Web-based projects using Google Docs on students' writing performance and critical thinking skills ( $F(10, 11) = 9.013^b$ ,  $p = .01$ , Wilks' Lambda = .217,  $\eta^2 = .783$ , observed power = 1.000)

Therefore, the result of the *multivariate tests* indicated that the use of academic Web-based projects using Google Docs in advanced writing classes had significant effects on the students' writing performance and critical thinking skills. The within-subject effects also showed that the intervention had a significant effect on the dependent variables. It is indicated in (Table 3) below.

**Table 3: Tests of Within-Subjects Effects**

Within Subjects Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>e</sup>
Pillai's Trace	.322	6.534	10.000	340.000	.000	.161	65.340	1.000
Wilks' Lambda	.681	7.171 <sup>c</sup>	10.000	338.000	.000	.175	71.714	1.000
Hotelling's Trace	.465	7.812	10.000	336.000	.000	.189	78.121	1.000
Roy's Largest Root	.455	15.485 <sup>d</sup>	5.000	170.000	.000	.313	77.425	1.000

a. Design: Intercept Within Subjects Design: time

b. Tests are based on averaged variables.

c. Exact statistic

d. The statistic is an upper bound on F that yields a lower bound on the significance level.

e. Computed using alpha = .05

As can be seen from the within subject effects table, the one-way repeated measures MANOVA is statistically significant  $\Lambda = .68$ ,  $F(10, 338) = 7.171$ ,  $p = .000$  with observed power of 1.0. Thus, it indicates that overall, there was a significant effect of academic Web-based projects

using Google Docs on both dependent variables (writing performance and critical thinking skills).

In the within subject effects table, *Table 3*, the Wilks' Lambda row is the important information for the assumptions were met. As can be seen, the Wilks' Lambda test statistic ( $p = 0.000$ ) is significant since the *sig.* value is less than 0.05. In other terms, the one-way repeated measures MANOVA is statistically significant. Thus, it indicates that overall, there is a significant effect of academic Web-based projects using Google Docs on both dependent variables (writing performance and critical thinking skills). It showed that there was a significant effect of academic Web-based projects using Google Docs on students' writing performance and critical thinking skills ( $F(10, 338) = 7.171^c$ ,  $p = 0.000$ ; Wilks' Lambda = 0.681,  $\eta^2 = 0.175$ , observed power = 1.000).

#### **Univariate Tests Result on Effects of AWP using Google Docs on WP and CTs, Separately**

A follow up test was conducted using univariate tests to determine the effect of academic Web-based projects using Google Docs separately on writing test and critical thinking skills scores. Results are presented on table 4.

**Table 4: Univariate Tests: Effects of AWP using Google Docs on WP and CTs, Separately**

Source	Measure	Type	IIIDf	Mean	F	Sig.	Partial EtaNoncent.	Observed			
		Sum	of	Square			Squared	ParameterPower <sup>a</sup>			
		Squares									
Time	WP	Sphericity Assumed	5394.252	5	1078.850	12.993	.000	.276	64.964	1.000	
		Greenhouse-Geisser	5394.252	4.030	1338.394	12.993	.000	.276	52.366	1.000	
		Huynh-Feldt	5394.252	4.640	1162.515	12.993	.000	.276	60.288	1.000	
		Lower-bound	5394.252	1.000	5394.252	12.993	.001	.276	12.993	.938	
	CT	Sphericity Assumed	4491.067	5	898.213	10.053	.000	.228	50.266	1.000	
		Greenhouse-Geisser	4491.067	3.918	1146.121	10.053	.000	.228	39.393	1.000	
		Huynh-Feldt	4491.067	4.493	999.636	10.053	.000	.228	45.166	1.000	
		Lower-bound	4491.067	1.000	4491.067	10.053	.003	.228	10.053	.869	
	Error (time)	WP	Sphericity Assumed	14115.914	170	83.035					
			Greenhouse-Geisser	14115.914	137.033	103.011					
			Huynh-Feldt	14115.914	157.765	89.474					
			Lower-bound	14115.914	34.000	415.174					
CT	Sphericity Assumed	15188.933	170	89.347							
	Greenhouse-Geisser	15188.933	133.229	114.006							

Huynh-Feldt 15188.933 152.752 99.435

Lower-bound 15188.933 34.000 446.733

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a. Computed using alpha = .05

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The results of Table 4 show the intervention had significant effect separately on each of the dependent variable. It was found that there is a significant main effect for the factor “Time” on the dependent variable Writing Performance (WP),  $F(5, 170) = 12.993$ ;  $p < 0.05$ ,  $\eta p2 = 0.276$ , observed power = 1.000). Similar result also obtained for the factor “Time” on the dependent variable Critical Thinking (CTs),  $F(5, 170) = 10.053$ ;  $p < 0.05$ ,  $\eta p2 = 0.228$ , observed power = 1.000).

The Univariate Tests result (Table 4) which shows each of the dependent variables alone also indicated that there were significant effects of the intervention on the dependent variables. The important rows in the table are the *Sphericity Assumed* rows because the MANOVA assumptions, including *Mauchly's Test of Sphericity* were met. (See Appendix-R). Accordingly, the table indicated that there was a significant effect for the variable time on the two dependent variables, writing performance, and critical thinking skills. It was found that there is a significant main effect for the factor “Time” on the dependent variable Writing Performance (WP),  $F(5, 170) = 12.993$ ;  $p < 0.05$ ,  $\eta p2 = 0.276$ , observed power = 1.000). Similarly, it was also found that there is a significant main effect for the factor “Time” on the dependent variable Critical Thinking (CTs),  $F(5, 170) = 10.053$ ;  $p < 0.05$ ,  $\eta p2 = 0.228$ , observed power = 1.000).

**Table 5: Grand Mean: Students' WP and CTs Scores**

Measure	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Writing performance	46.976	2.144	42.619	51.333
Critical thinking	45.552	2.094	41.298	49.807

The *Grand Mean* of the dependent variables shown in *Table 5*, depicted that the writing performance *mean* scores and Standard Error were larger than that of the critical thinking skills. Accordingly, while the *Grand Mean* and *Standard Error* of students' writing performance results, were ( $M = 46.976$ ;  $Std. Error = 2.144$ ), the critical thinking skills results were ( $M = 45.552$ ;  $Std. Error = 2.094$ ). However, as the writing performance and critical thinking skills rubrics were different, it was difficult to conclude that the students outperformed in their writing performance compared to their critical thinking skills.

#### Estimates on Students' WP and CTs Pre-test and Post-test Scores

**Table 6: Estimates: Students' WP and CTs Pre-test and Post-test Scores**

Measure	Time	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Writing performance	Pretest-1	41.171	2.692	35.702	46.641
	Pretest-2	43.257	2.564	38.047	48.467
	Pretest-3	43.886	3.083	37.621	50.151
	Post test-1	46.371	2.061	42.183	50.560
	Post test-2	51.429	2.859	45.619	57.238

	Post test-3	55.743	1.924	51.833	59.653
	Pretest-1	41.229	2.915	35.304	47.153
	Pretest-2	41.543	2.428	36.609	46.477
	Pretest-3	43.457	2.644	38.083	48.831
Critical thinking	Post test-1	43.857	2.267	39.250	48.464
	Post test-2	49.086	2.806	43.384	54.788
	Posttest-3	54.143	2.159	49.755	58.531

The estimates result in *Table 6* also presents *Standard Error* rather than the *Standard Deviation* for the different conditions, unlike the Descriptive Statistics table. As it is shown, the *mean* and *standard error* in the students' writing performance results before the intervention were (Pre-test-1,  $M = 41.171$ ,  $Std. Error = 2.692$ ; Pre-test-2,  $M = 43.257$ ,  $Std. Error = 2.564$ , and Pre-test-3,  $M = 43.886$ ,  $Std. Error = 3.083$ ) which showed that the results have no significant differences. Likewise, the *Mean* and *Standard Error* in the students' writing performance post-test scores were (Post-test-1,  $M = 46.371$ ,  $Std. Error = 2.061$ ; Post-test-2,  $M = 51.429$ ,  $Std. Error = 2.859$ , and Post-test-3,  $M = 55.743$ ,  $Std. Error = 1.924$ ) that indicated the results have no significant differences.

From these test results, we can understand that the students' *Mean* scores in the pre-tests were similar though there were some improvements. Likewise, even though there were some improvements, the students' *Mean* scores in the *Post-tests* were also similar. However, when the *Mean* scores in the pre-tests and post-tests were compared, they had significant differences. In other words, the students' *Mean* scores in the post-tests were higher than those of the pre-tests. On the other hand, the *Standard Error results* in the pre-test and post-test scores were most likely related. This implies that the students' writing performance was improved after the intervention, using academic Web-based projects via Google Docs.

In the same manner, the table also shows that the students' critical thinking skills results before the intervention (Pre-test-1,  $M = 41.229$ ,  $Std. Error = 2.915$ ; Pre-test-2,  $M = 41.543$ ,  $Std. Error$

= 2.428, and Pre-test-3,  $M = 43.457$ ,  $Std. Error = 2.644$ ) were similar. The students' critical thinking skills Post-test *Mean* scores (Post-test-1,  $M = 43.857$ ,  $Std. Error = 2.267$ ; Post-test -2,  $M = 49.086$ ,  $Std. Error = 2.806$ , and Post-test -3,  $M = 54.143$ ,  $Std. Error = 2.159$ ) had some differences. Thus, the critical thinking skills results indicated that the students' *Mean* scores in the pre-tests have no significant differences though there were some improvements among the pre-tests. There were also some improvements among the post-tests, the students' *Mean* scores in the *Post-tests*. However, when the *Mean* scores in the Pre-tests and Post-tests were compared, they showed significant differences. In other words, the students' critical thinking skills post-test result *Mean* scores were higher than those of the pre-tests. On the other hand, the *Standard Error results* in the pre-test and post-test scores were most likely related. The results indicated that the students' critical thinking skills have been improved when they used AWP using Google Docs in their writing classes.

#### **Pairwise Comparisons Results on Students' WP and CTs Pre-test and Post-test Scores**

As it is presented in the *Tests of Within-Subjects Effects* result (Table 3), the students' test scores showed differences based on time, but the differences in all times were not the same. Thus, in order to identify the difference among each of the test scores, it was necessary to see the *pairwise comparisons (with Bonferroni adjustment)* or/and *paired samples t-test*.

**Table 7: Pairwise Comparisons: Students' WP and CTs Pre-test and Post-test Score**

Measure (I) time	(J) time	Mean Difference (I-J)	Std. Error	Sig. <sup>b</sup>	95% Interval Difference <sup>b</sup>	Confidence for	
					Lower Bound	Upper Bound	
WP	Pretest-1	Pretest-2	-2.086	2.764	1.000	-10.811	6.640
		Pretest-3	-2.714	2.159	1.000	-9.530	4.102
		Posttest-1	-5.200	2.074	.256	-11.747	1.347
		Posttest-2	-10.257*	2.492	.003	-18.126	-2.389
		Posttest-3	-14.571*	2.352	.000	-21.996	-7.146
	Pretest-2	Pretest-1	2.086	2.764	1.000	-6.640	10.811
		Pretest-3	-.629	2.586	1.000	-8.793	7.535
		Posttest-1	-3.114	1.825	1.000	-8.876	2.647
		Posttest-2	-8.171*	2.242	.013	-15.250	-1.093
		Posttest-3	-12.486*	2.175	.000	-19.353	-5.619
	Pretest-3	Pretest-1	2.714	2.159	1.000	-4.102	9.530
		Pretest-2	.629	2.586	1.000	-7.535	8.793
		Posttest-1	-2.486	2.054	1.000	-8.970	3.999
		Posttest-2	-7.543*	1.844	.004	-13.364	-1.721
		Posttest-3	-11.857*	2.112	.000	-18.524	-5.191
	Posttest-1	Pretest-1	5.200	2.074	.256	-1.347	11.747
		Pretest-2	3.114	1.825	1.000	-2.647	8.876
		Pretest-3	2.486	2.054	1.000	-3.999	8.970
		Posttest-2	-5.057	2.084	.311	-11.637	1.523
		Posttest-3	-9.371*	1.661	.000	-14.616	-4.127
	Posttest-2	Pretest-1	10.257*	2.492	.003	2.389	18.126
		Pretest-2	8.171*	2.242	.013	1.093	15.250
		Pretest-3	7.543*	1.844	.004	1.721	13.364
		Posttest-1	5.057	2.084	.311	-1.523	11.637
Posttest-3		-4.314	1.966	.528	-10.522	1.894	
Posttest-3	Pretest-1	14.571*	2.352	.000	7.146	21.996	
	Pretest-2	12.486*	2.175	.000	5.619	19.353	
	Pretest-3	11.857*	2.112	.000	5.191	18.524	
	Posttest-1	9.371*	1.661	.000	4.127	14.616	
	Posttest-2	4.314	1.966	.528	-1.894	10.522	
CR	Pretest-1	Pretest-2	-.314	2.674	1.000	-8.755	8.127
		Pretest-3	-2.229	2.764	1.000	-10.953	6.496
		Posttest-1	-2.629	2.357	1.000	-10.069	4.812
		Posttest-2	-7.857	2.848	.139	-16.848	1.134
		Posttest-3	-12.914*	2.690	.000	-21.405	-4.423
	Pretest-2	Pretest-1	.314	2.674	1.000	-8.127	8.755
		Pretest-3	-1.914	1.995	1.000	-8.211	4.383
		Posttest-1	-2.314	1.746	1.000	-7.826	3.198
		Posttest-2	-7.543*	2.105	.016	-14.187	-.899
		Posttest-3	-12.600*	1.709	.000	-17.994	-7.206
	Pretest-3	Pretest-1	2.229	2.764	1.000	-6.496	10.953
		Pretest-2	1.914	1.995	1.000	-4.383	8.211
		Posttest-1	-.400	2.087	1.000	-6.988	6.188

	Posttest-2	-5.629	2.599	.562	-13.833	2.576
	Posttest-3	-10.686*	1.947	.000	-16.833	-4.539
Posttest-1	Pretest-1	2.629	2.357	1.000	-4.812	10.069
	Pretest-2	2.314	1.746	1.000	-3.198	7.826
	Pretest-3	.400	2.087	1.000	-6.188	6.988
	Posttest-2	-5.229	2.168	.321	-12.072	1.615
	Posttest-3	-10.286*	1.511	.000	-15.056	-5.515
		Pretest-1	7.857	2.848	.139	-1.134
Posttest-2	Pretest-2	7.543*	2.105	.016	.899	14.187
	Pretest-3	5.629	2.599	.562	-2.576	13.833
	Posttest-1	5.229	2.168	.321	-1.615	12.072
	Posttest-3	-5.057	2.153	.372	-11.855	1.741
		Pretest-1	12.914*	2.690	.000	4.423
Posttest-3	Pretest-2	12.600*	1.709	.000	7.206	17.994
	Pretest-3	10.686*	1.947	.000	4.539	16.833
	Posttest-1	10.286*	1.511	.000	5.515	15.056
	Posttest-2	5.057	2.153	.372	-1.741	11.855

A. Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 7 displays the pairwise comparisons of the pre-test and post-test scores. The pairwise comparison and the paired samples t-test carried out multiple comparisons between every possible combination of pairs for the conditions. Since the results gained from these tests were similar, the *Bonferroni adjustment* was reported to avoid repetition. As it was stated above, while the *Tests of Within-Subjects Effects* result showed that there was a significant effect of WAP using Google Docs, the pairwise comparisons result, table 7, presented exactly which pairs of conditions were significantly different from one another.

The pairwise comparison under WP indicates, the highest mean difference was found between post-test 3 and pre-test 1 (MD=14.571,  $p < 0.05$ ). While the lowest mean difference was found between pre-test 1 and post-test 3 (MD=-14.571,  $p < 0.05$ ). Similarly, the highest mean difference in terms of the pairwise comparison of the second dependent variable (CTs) was found between post-test 3 and pre-test-1 (MD=12.914,  $p < 0.05$ ). In contrast, the lowest mean difference was found between pre-test-1 and post-test-3 (MD=-12.914,  $p < 0.05$ ). The results imply the differences were very significant.

Besides, in order to understand whether the comparisons were significant, it was necessary to look at the Sig. column (and the asterisks in the *Mean Difference* column). The  $p$ -value needs

to be less than .05 to be significant.

Accordingly, the  $p$ -value of most comparisons were  $> 0.05$  within pre- tests and post- tests but some of them were below 0.05 between pre- tests and post- tests both in writing performance and critical thinking skills results.

The  $p$ -value of some comparisons under the writing performance test comparison including pre-test-1 and pre-test-2 (1.000); pre-test-1 and pre-test-3 (1.000) and pre-test-2 and pre-test-3 (1.000), were above 0.05. It showed that these comparisons were insignificant differences among these pairs. Regarding the post-tests of WP variable, comparison among post-test-1 and post-test-2 (0.311); and, post-test-2 and post-test-3 (3.72) were above 0.05. It showed that these comparisons were not significant differences among these pairs. However, the pairs post-test-1 and post-test-3 (.000) were below 0.05. It showed that these comparisons were significant differences among these pairs.

In the same vein, the  $p$ -value of some comparisons under critical thinking skills test comparison including pre-test-1 and pre-test-2 (1.000); pre-test-2 and pre-test-3 (1.000) and pre-test-2 and pre-test-3 (1.000) were above 0.05. It showed that these comparisons were insignificant differences among these pairs. Regarding the post tests of CT variable, post-test-1 and post-test-2 (0.321) and, post-test-2 and post-test-3 (3.72) were above 0.05. It showed that these comparisons were insignificant. However, post-test-1 and post-test-3 (0.00), which indicated significant difference.

The remaining comparisons were with posttest-3 in WP and CT categories and had less than 0.05 and there are asterisks in their *Mean Differences* column which shows that there were significant differences. Thus, it implied that even though there were test score differences among the pre-tests and post-tests mainly with post-test-3 for both WP and CT tests. Among the 60 pairs, 24 pairs were below 0.05. The rest 34 pairs within and between pre-tests and post-tests for both WR and CT had insignificant differences ( $P>0.05$ ).

Regarding the pre-tests and post-tests of WP variable, comparison among pre-test-1 and post-test-1 (.256); pre-test-2 and post-test-1 (1.000), and pre-test-3 and post-test-1 (1.00) were above 0.05. This shows that they had no significant difference among the pre-tests and post-tests. On the other hand, comparison among pre-test-1 and post-test-2 (.003); pre-test-2 and post-test-2 (.013), and post-test-2 (.004) had significant differences ( $<0.05$ ). Similarly, post-test-3 had

significant differences ( $<0.05$ ) with the three pre-tests (pre-test 1, pre-test 2 and pre-test 3) with p value .000.

Regarding the pre-tests and post-tests of CT variable, comparison among pre-test-1 and post-test-1 (1.00); pre-test-2 and post-test-1 (1.000), and pre-test-3 and post-test-1 (1.00) were above 0.05. Similarly, comparison among pre-test-1 and post-test-2 (.139); pre-test-2 and post-test-2 (1.000), and post-test-2 (.562) were above 0.05. This shows that they had no significant difference among the pre-tests and post-tests. However, post-test 3 had significant differences ( $<0.05$ ) with the three pre-tests (pre-test 1, pre-test 2 and pre-test 3).

Generally, the insignificant findings obtained among the pre-tests implied the students were in the same status in their academic writing performance and their critical thinking skills in writing before the intervention. The insignificant results which were seen in the comparison of the pre-tests with post-test-1 and post-test-2 in both dependent variables showed, the students were not experiencing the intervention up to the expected level since the first two post-tests were given for them as soon as the completion of the intervention. On the other hand, the significant differences which were found between each pre-test and post-test-3 and vice versa in both dependent variables implied as students have showed these improvements, or differences in RP and CTs after experiencing the intervention with lot of practicing exposure. These findings overall are also very indicators that working collaboratively on academic Web-based writing projects via Google Docs is shown extremely encouraging after a variety of experiences and choices for students during the writing practice.

The Descriptive Statistics results showed that the students' Mean scores in the post-tests were greater than those of the pre-tests which implied that the students' writing performance and critical thinking skills have been improved after the intervention, academic Web-based projects using Google Docs. In addition, the results of the multivariate tests indicated that the use of academic Web-based projects via Google `Docs in writing classes had significant effects on the students' writing performance and critical thinking skills.

The *Within Subjects Effects* also showed that there was a significant effect of the intervention on students' writing performance and critical thinking skills. The *Univariate Tests* result also indicated that there was a significant effect on the variable time on the two dependent variables, writing performance, and critical thinking skills. Likewise, the *Grand Mean* of the dependent

variables revealed that the writing performance *mean* scores and Standard Error were larger than that of the critical thinking skills. However, as the writing performance and critical thinking skills, rubrics were different, it is difficult to conclude that the students outperformed in their writing performance compared to their critical thinking skills

As to the *Descriptive Statistics* results, the *Estimates* result also indicated that the students' *Mean* scores in the post-tests were greater than those of the pre-tests, implying that the students' writing performance and critical thinking skills have been improved after the intervention, academic Web-based projects using Google Docs. In the same vein, the *pair wise comparisons* result also showed that even though the students writing performance and critical thinking skills scores had shown a significant differences between the pre-tests and the post-test-3, vice versa in both dependent variables, the insignificant difference findings which obtained between pre-tests with post-test-1 and post-test-2 were show the improvements were not that much high compared to the test score improvements mad Therefore, the descriptive statistics and one-way repeated measures MANOVA test results revealed that Web-based academic projects using Google Docs had positive effects on the students' writing performance and critical thinking skills.

#### 4.1.1.2. Textual Analysis Results on Students' Writing Performance

Textual analysis was made for the sake of gathering a data that helps to see as to how the quantitative analysis, or statistical findings exactly show the students' writing performance before and after intervention. In addition, it was also made to get important evidences that cannot be explained in quantitative way. In other words, it was used to get additional evidences in order to see effects of working on Web-based academic projects using Google Docs on the students' writing performance. Therefore, in doing this textual analysis the student written essays before and after intervention were randomly chosen. The essay which was randomly chosen for the textual among the three pre-tests were pre-test-2 and pre-test-3. In the same manner, particularly student 14 and 22 written essays were chosen among the students' pre-test 2 and pre-test-3 written essays respectively. Then, the students' written essays were evaluated according to the British Council International English Language Testing System (IELTS) writing task descriptors (2018). The task has four scales under nine bands. The four scales are Task Achievement, Coherence and Coherence and Cohesion, Lexical Resources and Grammatical Range and Accuracy. In addition, post-test-1 and post-

test-2 were chosen randomly among the three post-tests which were given for the students after intervention. Therefore, student 14 and 22 written essays were taken purposively since it helps to see the students' progress after intervention. As a result, the students had showed good progress after working collaboratively on academic Web-based writing projects using Google Docs on their writing performance. In other ways, the findings were also very informative as academic Web-based projects using Google Docs should be used with unlimited exposure to bring a dramatic change on students' writing performance.

## Pre-test-2 Essay of Student 14

NP

### Pre-test-2 Essay of Student 14

There are some people who believe that female's genital circumcision should be constitutionally supported and executed to produce well-disciplined generation, this idea is not acceptable because, it is harmful tradition as well. as it affect on the well-fare of female. In this introduction I want to reflect female's genital circumcision should be constitutionally impossible to support due to some reasons like at pregnancy, on health, and etc.

I am strongly disagree, female's genital circumcision ~~should be~~ is a bad idea in our country. Because female's genital circumcision has an impact on female health, mistreating with husbands, and breaking household equipments are impossible to support this assumption. Because this idea is unacceptable by community and health care. It is a bad culture, and damaged our economy, parents as well as female itself. According to health care female's genital circumcision is not good idea. as a result when female's happen misaction female's may happen different problem on your own health.

In General, female's genital circumcision is not an acceptable assumption in our country. Because it has many problems on female's well-being, especially at the pregnancy, at child birth the blood excessive out. It is also a bad as well as an harmful on female's health.

As can be seen in the essay, student 14 was not good as expected level when the written essay was evaluated according to IELTS Writing Task Descriptors in terms of Task Achievement, Coherence and Cohesion, Lexical Resources and Grammatical Range and Accuracy. The essay did not incorporate all the required part of the task, it lacked supporting the writer's point of argument with strong thesis statement and supporting details. The student also used very limited range of vocabulary and sentence structures in writing her essay. Moreover, problem of referencing and grammatical errors like (faulty sentence, lack of mechanical linkage etc.) were seen on student's written essay. The essay was organized in to three paragraphs with less than 250 words, indicating that at least the text did not meet a minimum word requirement. Because the student was expected to write the essay that incorporates five paragraphs with 250 or more words. On the other side, the student as a writer tried to show her clear position about the argumentative issue/ point through explaining her rational roughly. For instance, in paragraph 1 she stated "..... in this introduction I want to reflect Female's genital circumcision should be constitutionally impossible to support due to reasons like at pregnancy, on health and etc. Again in paragraph 2, she explained ".....because this idea is unacceptable by community and health care. It is a bad culture, and damaged our economy, parents, as well as female themselves." It was good to explain in this way, but her rationales were shallow, it lacked to answer the 'how' question in convincing her point of view over the prompt. Besides, she said nothing in the essay why others support female genital circumcision, or considered female genital circumcision important. In other words, the ideas were not clearly stated and supported. The writer also rose a point which did not directly alien with her main point of argument (female genital circumcision). For example: in paragraph 2 she stated ".....it is a bad culture and damaged our economy." No further explanation was presented there to convince or to answer how.

The essay presented information and ideas, but the development was poor. It lacked logical coherence. There was unwanted repetition of ideas, and they were also stated here and there. The concluding paragraph did not state the whole idea the writer stood to write her argument. For example, in the introductory paragraph she wrote her essay against the argumentative idea that "..... in this introduction I want to reflect Female's genital circumcision should be constitutionally impossible to support due to reasons like at pregnancy, on health and etc." But in the last concluding paragraph, she only described as it is only unacceptable assumption, she said nothing in line with the constitutional and practical aspects to convince her point of view through giving the needed emphasis.

Core cohesive devices like *and*, *as a result*, *as well as* and *in general* were used in the student essay, but many of these devices used in the essay inaccurately and repetitively. As can be seen in the essay, there were lack of using cohesive devices to connect ideas and to achieve coherence of thoughts. Consequently, there were no clear connections between each sentence and each paragraph. For instance, in paragraph one as introductory paragraph the student as introductory paragraph she has to discuss her list of basic rationales roughly in detail through taking them as thesis statement one by one, instead she stated unwanted repeated ideas and other issues which were not totally related to the main argument. Again in the last paragraph, the student tried to use appropriate cohesive device as concluding paragraph “In general....” however, the idea presented in the paragraph following was almost the same idea which was explained using the same words/expressions like the first two paragraphs instead of closing the essay with strong explanation that supports her point of argument in other terms including her own suggestion. This can be a clear indication as the essay did not meet the coherence and cohesion criteria/ scale as expected level according to the IELTS writing task descriptor 2.

In terms of lexical resources, different problems were seen in the essay. One of them was writing words with incorrect spelling like: “preganancy, calture etc.” The other big problem was using common words repeatedly throughout the essay. Words like health, problem, assumption, acceptable etc. were very good examples. Moreover, using inappropriate vocabulary, limited range of words, and word formation were seen in the essay. As a result, the essay was exposed for poor paraphrasing and distortion of idea/ message that the essay intends to convey/transfer. Therefore, from these instances we can infer that the student performance was not good in terms of lexical resources before intervention in pre-test 2.

The fourth criteria which was served for this textual analysis was grammatical range and accuracy. Hence, the essay was written with limited range of language structure / grammatical range. It means, from the beginning through the end, the essay was written mainly using simple sentences and one or two compound and complex sentences, as well as subordinate clauses. From this we can understand as the essay lack variety of sentences that help in making the essay easily understandable and attractive for readers.

Going through the student written essay in terms of grammatical accuracy, only some structures were correct, but the rest sentences were full of punctuation and capitalization problem, as well as general grammatical errors: Not using the appropriate punctuation marks in proper place from the beginning through the end of the essay was seen in the written essay for

example, in paragraph 1 line 4 there should be a comma after "...In this introduction.... "but there was no comma at all. The same is true in paragraphs 2 and 3. In writing, not using appropriate punctuation mark in the place where it is required makes the written essay difficult to understand or it may convert the proper message of the essay. As it explained above, capitalization was the other big problem which was seen in this essay for instance, in paragraph 1, line 1 'Female's', paragraph 2, line 5 'Community', paragraph 3, and line 1 'In General'. The letters written in bold were letters which were wrongly capitalized in the essay. Moreover, the essay was also full of grammatical errors like (subject verb disagreement in paragraph 1, line 4 'it affect'), (improper use of preposition paragraph 1 line 6 'at pregnancy'), (Dangling or misplaced modifier in paragraph 2 line 3 and 4 'I am impossible to support this assumption), (improper use of article paragraph 3 line 3 and 4 'it is also a bad as well as an harmful on female health) and among others. Thus, from the textual analysis above we can understand that as the student was not outperformed well /at the expected level in terms of grammatical range and accuracy.

Overall, the textual analysis reported that student 14 academic writing performance before intervention in terms of the four scales: Task Achievement, Coherence and Cohesion, Lexical Resources and Grammatical Range and Accuracy according to IELTS Writing Task 2 Descriptor was not good. However, the same student 14 produced good written essay after intervention. Therefore, this student's post-intervention written essay and its textual analysis result was presented next.

## Post-test-1 Essay of Student 14

W/P

Post-test-1 Essay of student 14

Universities should control their students' way of life.

Some people argue that at university level controlling the students is not ~~surely~~ good since the students are enough for themselves, and they know bad or good things. However, I don't agree with his ideas, because if they got excess freedom they can't control themselves. As a result, they may be imposed to unwanted pregnancy, drug abuse and academic failure. Therefore, universities should control their students way of life.

If universities don't not take care the students, they will impose to unwanted pregnancy, they observe their friends and they continue to do ~~what~~ what their friends did, because they judge everything as fashion, and the students want to be free. But in order to achieve a good results the students must be controlled unless they forget their goal.

In university, no one live with his/her family, so universities must take care to ~~the~~ their students, unless they imposed to drug abuse. If they addicted once, they can't leave it. As a result, they lost their mind, they damaged psychologically, after that they discharge from their academic learning.

1/2

WP

## Post-test-1 Essay of Student 14

When students get excess freed in the campus, they may not control themselves, they ~~will~~ <sup>do</sup> not attend class, they ~~will~~ <sup>do</sup> not achieve a good result then finally, they ~~can~~ fail in achieving their academic goal. So universities should control the students.

Generally, I argue that universities should control their students carefully, because they engaged in wasteful ~~and~~ practices including HIRAZI career, they don't achieve their goal. So universities have ~~the~~ great responsibility to control their student way of life at all.

2/2

As it was explained above in the introduction of the textual analysis, the essay which was chosen for this textual analysis was the same student essay from the post-tests since it helps to see the effects of the intervention (collaborative writing using Google Docs) on students' writing performance. Therefore, again student 14's written essay was taken from the total students' post-test- 1 essays, and it was evaluated in terms Task Achievement, Coherence and Cohesion, Lexical Resources, as well as Grammatical Range and Accuracy compared to the student performance before intervention. As a result, student 14 achieved the expected word requirement and the idea posed in the prompt side. As it can be seen in the essay, the essay was organized in to five paragraphs with over 250 words, and it was organized in the manner that clearly shows the introduction, body and conclusion of the essay.

The student also presented a clear position besides explaining the opponent view in line with the issue. For instance, in paragraph 1 the student tried to show her clear position including prompts' view with their rationales. To show this with evidence paragraph 1 read as follows:

*Some people argue that at the university level controlling the students is not good since the students are enough for themselves, and they know bad or good things. However, I don't agree with ideas, because if they get excess freedom they can't control themselves. As a result, they may be imposed to unwanted pregnancy, drug abuse, and academic failure. Therefore, universities should control their students' way of life.*

From the explanation above, the textual evaluation showed as the essay was good in achieving the required tasks to write this essay in developing ideas fully, as well as in showing the writer clear position throughout the essay. The essay also clearly indicated the student performance was very good after intervention in post-test 1 in developing thesis statements to support her point of argument, as well as in illustrating them with relevant ideas/ supporting details compared to the student performance before intervention. As it was seen in paragraph one, unwanted pregnancy, drug abuse and academic failure were considered as rationales in supporting the writer point of view/ argument/ position. Then, in the next three paragraphs (in paragraph two, three and four) each rational was discussed one by one through taking each as a thesis statement/ main idea, and using relevant supporting details. Hence, the main ideas unwanted pregnancy, drug abuse and academic failure in the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> paragraphs respectively were presented through answering the ' how' question in line with the student/

writer point of argument. As a result, from this textual analysis can clearly see, the main ideas of the essay were logically organized.

On the other side, in the essay, there were some explanations exposed to overgeneralization, and ideas that clearly did not show fact and personal opinion. For example, in paragraph two: “In order to achieve a good result the students must be controlled unless they get their goal and exposed to unwanted pregnancy.”

In terms of using appropriate cohesive devices or linking words in efficient manner in the essay was very good, particularly when it compared with the student performance before intervention. For instance, however, and, because, so, unless, as a result, after that, then finally, generally etc. were good indicators for this. Thus, it helped the writer to show a clear connection between each sentence and each paragraph. To the contrary, there were some over repeatedly used cohesive devices like and, so, because and others. In addition, there were some supporting details that were presented without adequate explanation. For instance, the way that the student illustrated the two main ideas: unwanted pregnancy and drug abuse, rather she simply linking them with the main argumentative issue. Generally, we can conclude that student 14 outperformed after intervention in terms of cohesion and cohesive devices when compared with the student performance before intervention.

As it was explained above, the essay was written with required number of words in post-test one. In other words, numbers of lexical resources were efficient to develop the given argumentative essay. It was also good in using words which were not common and new word formation like: look after, imposed, judge, fashion etc. However, some words were written with spelling error for example, juge, fashine, freed etc. Inappropriate use of words and expressions was also the other drawback of the essay. For instance, the term imposed was used inappropriately in many of the paragraphs in the essay. From the context the writer used it, can understand as she used it to say exposed. In addition, taking being effected by HIV AIDS as ‘a harmful practice’ in the last paragraph of the essay was the other big indicator of using wrong expression. Overall, student 14 performed well after intervention in terms of lexical resources even though there were some limitations in the essay.

Grammatical range and accuracy were the other basic criterion which was served for this textual analysis. Accordingly, the student used a variety of structures in constructing like simple and complex sentences. For example, in paragraph three, line one ‘In university, no one

live with his/her family.’, it was an example for a simple sentence. In paragraph one, from line to line three ‘Some people argue that at university level controlling students is not good since students are enough for themselves, and they know bad or good things’, it was an example for complex sentence. The writer/ the student also tried to use different grammar tenses for instance, conditionals, modal verbs, relative clause, present, past tenses etc. Particularly, in paragraph three ‘If they addicted once, they can’t leave it.’, it was an example for a sentence that had constructed using conditional. In paragraph four, ‘So universities should control the students’, it was an example that for the sentence that had constructed using modal verbs. Similarly, in paragraph four, ‘When student get excess freedom in the campus, they may not control themselves, they do not attend class, they do not achieve a good result’, it was an example that had constructed using relative clause. In the last/ 5<sup>th</sup> paragraph ‘So universities have great responsibility to control their student’s way of life at all.’, it was an indicator for the sentence that had written using present tense. In addition, in paragraph three, ‘As a result, they lost their mind, they damaged psychologically, after that they discharged from their academic learning.’, it was an example for a sentence that had constructed using past tense. Moreover, different sentences were formed with connectors like: then finally, as a result, generally etc. subordinator like since, because, if, unless, after that etc. coordinators like: and, so, however etc. Generally, the student performance after intervention in post-test 1/one clearly showed as the student outperformed well or brought progress in terms of grammatical range and accuracy when it compared with the student her own performance before intervention in pre-test 2/two. However, some common grammar errors, punctuation, as well as capitalization problems were still seen in the student post-test written essay.

Overall, the textual analysis revealed that the student performance was good in terms of the four scales or criteria: Task Achievement, Coherence and Cohesion, Lexical Resources and Grammatical Range and Accuracy according to IELTS Writing Task 2 Descriptor. In other words, the textual analyses made on the student pre-intervention written essay and post-intervention essays were very informative in showing as the intervention (Academic Web-based projects/ Web-based Collaborative Instruction specifically, via Google Docs) had its own positive effects in promoting the student’s academic writing performance.

Pre-test-3 Essay of Student 22

(117) Pre-test-3 Essay of student 22

Many people believe that Facebook is the best social media, because of it enables individuals with ease to communicate with each other. But I don't agree with their idea due to several reasons.

The first reason is, it exposes individuals to have a false relationship with a person they don't know ~~with~~ well. As a result, they become hard psychologically when they ~~have~~ know the reality about them.

The other reason, it affects one's culture negatively. Because, people who highly depend on what they see and hear in the Facebook, easily abandon and ignore their own endogenous culture. They only ~~act~~ act what they see and hear. Consequently, they may exposed to identity crisis.

||

Student 22's essay was evaluated based IELTS Writing Task Descriptors in terms of the four basic writing criteria's including: (Task achievement, Coherence and Cohesion, Lexical Resources and Grammatical Range and Accuracy). As can be seen in the essay, it was not fulfilling all the needed components and the required number of words based on the instruction given. For example, the student was expected to write an essay which incorporates: (introduction, body and conclusion parts) and to construct the essay with 250, or over words, and with in five paragraphs. But the essay revealing that the text did not meet at least the minimum requirements. Hence, the essay was only written only including introduction and body parts of the essay with in three paragraphs, and it was also built with around 108 words.

In terms of Coherence and Cohesion, the way the student stated his point of argument beginning from illustrating the opponents' views and their rationales for it was good. In addition, the way he went through explaining his specific rational one by one in the second and third paragraph of the essay using appropriate linking words and beginning from a general overview of his rational at the end of the introductory paragraph was also good. Examples of cohesive devices used to connect ideas and to achieve coherence of thought in the essay include: the first, the other, but, consequently, and among others. Moreover, the ideas he raised as rationales were highly attached with his point of argument. However, the explanation seemed more personal since he didn't support them with tangible evidences to convince the reader. Besides, the essay lacked detail explanation and contextual examples in order to make the thesis statement more understandable to the readers. Particularly, not closing the essay with strong conclusion was the other major drawback which has seen in the student 22's essay in pre-test-3. But the essay needs to include a conclusion since it provides an opportunity to restate the thesis statement, remind the reader of the main argument, and its significance through reinforcing the writer's message. Hence, the conclusion should be written including components like: paraphrased, or restatement of the thesis, summary of main points, the broader implications of the writer argument, call to action if applicable, and ending with a thought-provoking statement or question.

With reference to Grammatical Range and Accuracy, a lot of grammatical errors have seen in the essay including from minor capitalization and spelling errors through subject-verb disagreement problem, using incorrect tense forms, and lack of using variety of sentence

structures. For example, (problem of capitalization: paragraph one the first word first letter “many”), (Spelling error: paragraph one line two “communicate”, paragraph two line two “face”, paragraph two line three “pschologicaly”, paragraph three line four “calture”) Subject-verb disagreement: paragraph two line three “...they becomes...” (using in correct tense form: “...they becomes hurt pschologically when **they Knew** the reality about them.”

In terms of lexical resources, the big problem was using limited number of words to explain ideas in the essay. Many of the words were written in the text with incorrect spelling and capitalization problem.

(WP) Post-test-2 Essay of Student 22

People argue that females' affirmative action should stop simply looking their enjoyment in very civilized countries. However, I strongly disagree with their ideas. As to me, first knowing the need for females' affirmative action is basic before suggesting a decision to stop it. Because there are many rationals for females' affirmative action.

The first reason is historic inequality since women have been marginalized and denied in many areas, it seek to rectify this historical injustices and create a more equitable society.

The second reason is economic empowerment, because promoting women's participation in the workforce can leads to economic growth due to more than 50% of the society are women, particularly in our country.

The third reason and the other basic reason is social justice, because ensuring that women have equal access to opportunities is a matter of fairness and justice. Affirmative action can help level the playing field and promote social equity.

Overall, ensuring females' affirmative action is very important in creating a more equitable society for women and underscores the broad benefits.

1/2

(QWP) Post-test-2 Essay of Student 22

Therefore, concerned bodies should aggressively work  
s strengthening policies which favour the women's rights  
in every aspects.

In order to see the effect of the intervention on students' academic writing performance the same student essay from post-tests were chosen purposively and used in this textual analysis. Therefore, the student essay was evaluated in terms the basic writing criteria's including: (Task achievement, Coherence and Cohesion, Lexical Resources and Grammatical Range and Accuracy) according to IELTS Writing Task Descriptors, and compared to the student his own performance in pre-test-3 essay. Hence, student 22 achieved better many of the requirements compared to his achievement in pre-test-3 written essay. The only requirement which the student didn't meet according to the instruction is, the number of words he was expected to use in constructing the essay. The student was asked to use 250, or over words, but he only used around 182 words. However, unlike his writing essay in pre-test-3, the student closed post-test-2 essay with strong conclusion through providing the needed for his point argument.

Moreover, the writer clearly stated his own and opponents' view and their rational behind. But, he gave less focus in explaining opponents' rationales. For example, "People argue that females' affirmative action should be stopped simply looking their engagement in very civilized countries." It implies as the writer ignored other possible rationales that can be considered as reasons for opponents' counter argument.

On the other side, the flow of ideas beginning through end was very good in terms of coherence and cohesion. The essay began with good introductory paragraph and it developed the other paragraphs accordingly and procedurally using appropriate cohesive devices. For example, In the second paragraph line one: "The first reason is", In the third paragraph line one: "the second reason is" , in the fourth paragraph line one to line two: the third and the other basic reason is", in the concluding paragraph line one: "Over all". In addition, issues stated as rationales in the essay seemed convincing and more professional. We can see the issues stated as reasons in the second third and fourth paragraphs as examples for this.

In terms of lexical resources, student 22 outperformed better in post-test-2 compared to his performance in pre-test-3. As it can be seen in the essay the student used various unique and professional terms in the text. For example: paragraph two line one "historical inequality", paragraph two line two: "marginalized and denied", paragraph two line three: "rectify", paragraph three line one: "economic empowerment", paragraph three line three and line four

“fairness and justice”, paragraph three line five: “social equity”. In addition, the number of words used to compose the essay were relatively many when compared with the number of words used to construct pre-test-3.

Finally, grammatical range and accuracy was the other basic criteria which served to evaluate student 22’s written essay. Accordingly, student 22’s performance after intervention was highly improved in terms of grammatical range and accuracy. However, still there are some grammatical difficulties in the student post-test-2 essay like: lack of using variety of sentence structures, using long and one sentence explanation frequently, problems in line with subject-verb disagreement for example, paragraph two line four: ”society are”, problem in using the appropriate punctuation marks in proper place for instance, in paragraph three line two the writer omitted to use the apostrophe between the word women and letter s to indicate possession: “womens participation” , after the end each cohesive devices in the text, particularly in paragraph two, paragraph three and four the writer also omitted to use a comma and among others.

#### 4.1.1.3. Focus Group Discussion Results on Students’ Writing Performance

The focus group discussion was used to get additional evidence that helped to triangulate the data that obtained through test about the effects of academic Web-based projects / Web-based collaborative instruction specifically, via Google Docs. Accordingly, many of the participant students explained it was important and it had a positive influence in their academic writing performance in terms of Task achievement, Coherence and Cohesion, Lexical Resources, as well as Grammatical Range and Accuracy. The students also stated that Google Docs provided them a good opportunity to develop their writing skill through mitigating unpleasant situations/problems that encountered in line with time usage and feedback giving process. According to them, since writing skills requires a lot of exposure to be developed, they mentioned as it created conducive environment for them to practice the skill without both time and place boundaries. In line with this, they stated it can be a very good alternative when time constraint encounters in face-to-face collaborative learning in class-room.

Moreover, in using Google Docs to do writing tasks/ projects collaboratively, they stated that it was too unique since it helped them in searching/looking for different information including

the meaning of new words/ unfamiliar terms in constructing their essay through using search engine, internet and among other options. However, lack of technical skill to use Google Docs actively, lack of trained/habit to use Google to work on collaborative writing tasks/ projects regularly, lack of qualified device and weak internet access/ connection were considered as the major challenges by them in working on collaborative writing tasks/ projects properly.

In addition, the FGD report indicated that using the application/ Google Docs to work on collaborative writing tasks/ projects actively was difficult for some students even though the needed training was given for them before intervention period. This was very informative that additional capacity building works and regular professional assistances were required until students efficiently use Google Docs to work collaborative writing tasks/projects properly.

As it was explained above, the other big problem in using Google Doc was many students forget to do the task since they had not experience /trend to do in that way. Therefore, in line with this, the participants suggested that the course teacher and the group leaders should notify the group members until they experience it.

The other challenge raised by students in using Google Doc to do collaborative writing tasks was using smart phone in practice to write an essay. As the discussion report revealed that using smart phone to write an essay was not easy since it took too much time to type the writing draft using it. Instead, the participants suggested it might be appropriate to practice writing at word, sentence and paragraph level. As a result, they recommended computer to practice writing at essay level in the place of smart phone. And the idea forwarded as recommendation was highly supported by those students who used their personal computer and the office desk top in practicing essay writing.

Finally, lack of regular and strong internet access/ connection was among the challenges in using Google Docs to do collaborative writing tasks properly. As participants in the FGD explained that there was distorted internet service even though even they were given internet package gift from the researcher to use in the time and place where they did not get Wi-Fi internet service. But they explained in underlining the problem as it might be an immense challenge since it was not easily affordable for many students to buy internet package when they faced Wi-Fi internet connection problem in the campus.

In line with devise, some students additionally stated that having smartphone and internet

access were not enough to work on collaborative writing tasks/ projects using Google Docs. Their rational behind this explanation was as they did not practice/ work on the collaborative writing tasks/ projects actively due to their smart phone was not qualified enough to practice it in the expected pace, and in grabbing strong internet connection.

Overall, the FGD revealed that academic Web-based projects/ Web-based collaborative writing instruction using Google Docs had its own positive influence in improving the students' academic writing performance in terms of Task Achievement, Coherence and Cohesion, Lexical Resources, and Grammatical Range and Accuracy. Therefore, from the FGD report we can understand, Collaborative writing using Google can bring a dramatic change on students' academic writing performance through mitigating the challenges which were explained above in using it. Thus, EFL teachers and students can use it besides the face-to-face collaborative learning or can use it as alternative method in order to develop their students' academic performance through considering the necessary conditions in to account.

#### 4.1.1.4. Diary Analysis Results on Students' Writing Performance

In this section, results that were obtained through students' diary analysis/ reflective journal about students' daily feelings, thoughts, and experiences about the effects of Web-based collaborative writing instruction/ academic Web-based projects/tasks specifically, via Google Docs on their writing performance was presented. The findings of this diary analysis were also served to triangulate the data that gathered through the quantitative data collection instruments, as well as to gather additional evidences that we cannot find using quantitative analysis. Accordingly, the findings revealed that using academic Web-based projects/tasks via Google Docs had brought good improvement on students writing performance. In other terms, it indicated that the intervention had its own positive effects on students' writing performance. Most of the participants surely explained as they have seen good progress in their writing performance as a result of the intervention/academic Web-based projects specifically, via Google Docs. In relation to this, one of participant students' explanations in her diary was read as follows:

*I believe, as a skill writing is not something that we developed through learning only in the classroom. Therefore, as to me, the intervention is a good platform that helps us to easily develop our writing skill with lot of practice beyond the class-room since the world is in change. Thus, I found it is good in developing my writing skill.*

From the explanation above, we can understand that the intervention provided students good opportunity to develop their academic writing skill since it helped them to practice the skill beyond the classroom without any time and place restrictions through making the collaborative learning process simple.

Another student also stated:

*As to me, trying new approach in the teaching learning process is good. Because we students always need to try something new since we are young. Therefore, for me, it was good in improving my writing skill except the limitations that I had faced in using it properly.*

The above illustration was very informative as the intervention has had a positive effect on the students' academic writing performance.

Particularly, in practicing to construct an argumentative essay, many of the students explained it was found very helpful and unique since it allowed them to get information for their writing through using different alternatives like the internet, search engine etc. In addition, they stated it was significant in making the writing learning process collaboratively beyond the classroom simple.

Around six students mentioned they've only brought some change that did not satisfy them. And, these students listed down different factors/ challenges that did not make them to bring the expected change/ achievement on their writing performance using the intervention like: lack of technical skill to use the app actively, not having qualified device, as well as weak internet connection.

Only two, among the 35 participants reported that they were not satisfied enough in using academic Web-based projects to improve their writing performance since everything was new for them or they were new for technology mediated learning at all. According to them, they strongly explain as they have to learn and prefer to learn using the conventional way until they familiarize themselves with it/ academic Web-based projects via Google Docs. But these students did not deny explaining the benefit of it/ the intervention in promoting their writing skill and facilitating the collaborative process. These students also suggested, as they believe

it can bring the needed change on the students' academic writing performance if students get highly organized training on how to use the application to work on collaborative writing tasks/projects, as well as if they practice the skill / they work on collaborative writing tasks/projects with unlimited exposure.

Common challenges raised by students in using Google Docs to do collaborative writing tasks were lack of technical skill, weak internet connection, and problem in line with device. As a result, they forwarded the following points as recommendations: providing regular and organized trainings on technology mediated learning including the intervention, providing sustainable solution in line with internet connection and device problems using different mechanisms. Specially, around 15 participant students explained using smart phone to practice writing at essay level was difficult since it made them to be late in coping their writing draft on the phone to share for their friends while they were working online using Google Docs. As a result, they suggested computer mediated learning instead of smart phone to mitigate the problem. In line with this, those students who used their personal computer and the campus desk top they did not mention this in their diary as a challenge.

Overall, from the explanations above, we can conclude that academic Web-based projects/tasks using Google Docs has brought good progress on students' academic writing performance in terms of Task Achievement, Coherence and Cohesion, Lexical Resources, and Grammatical Range and Accuracy. In addition, the findings of the diary analysis were indicators as using the intervention can bring a dramatic change on students' academic writing performance in the future through mitigating the challenges which the students faced during the implementation of the intervention. Thus, EFL teachers can use academic Web-based projects/ Web-based collaborative writing instruction via Google Docs as a means to develop learners' academic writing performance besides the conventional way of learning / face-to-face collaborative learning through considering the needed conditions in to account.

#### 4.1.1.5. Textual Analysis Results on Students' Critical Thinking Skills

The critical thinking ability in writing was evaluated using rubric which was adapted from Facion (2015) in order to see the effects of collaborative writing activity using Google Docs on students' critical thinking skills. In doing so, for this textual analysis, pre-test one was randomly chosen among the three tests which were given for the students consecutively before intervention. In the same way, student 26's and student 9's written essays were selected among

the written essays of students from pre-test one. Accordingly, the student critical thinking ability was assessed in terms of the six core critical thinking skills and presented below.

### Pre-test-1 Essay of Student 26

**CT** *purpose* Pre-test-1 Essay of Student 26  
pre-test 1.

Having sexual is not fair for university students

• Having sexual friendship ~~have~~ danger or unimportant things for all over university students without discrimination. ~~people~~ <sup>people</sup> that have sexual friendship are different from other students by having little Grade result (GPA). If one person follows girls ~~for~~ <sup>he</sup> forget his vision or his objective. he is not achieve his goal like wise. he is not successful - <sup>at university level</sup>

Having sexual friendship <sup>to</sup> is indirectly leads sexual transmitted disease (STD) like HIV, AIDS, Chancroid, and etc. People that have sexual friendships are like people without saving ~~time~~ <sup>their</sup> properly. If ~~they~~ follow the sexual ~~relationship~~ relationship it leads to different problems. ~~Since~~ the ability to think in general is decline or it is become very minimum or small. In addition, ~~people~~ people that have sexual friendship is usually go to bed for sexual intercourse. For this reason, the income of his family may be destroyed or damage, his body may be weight loss, the ability to think become low.

Generally, having sexualfriend relationships is not good for university students in general. rather it is bad habit. for this reasons, students at the university level should not follow such action rather he should follow his lecture or education because his ~~purpose~~ <sup>purpose</sup> is to gain new knowledge.

Interpretation is one of the six core critical thinking skills. Based on the analysis, the student performance in line with this sub and core critical skill was poor in pre-test one. Going through the student's written essay, it seems that the student understood the argumentative issue at the beginning of his writing, but looking deep inside the way he expressed, it has lots of difficulties. Some of the drawbacks were the manner he explained was not attractive, and the points he raised to support his argument were not directly alien with the main argumentative point. For example, in paragraph 2 he explained "having sexual friendship at university level is indirectly leads to sexually transmitted diseases like HIV....." no further explanation was presented there to answer the question 'how'. In addition, in paragraph 2 he also mentioned that "...If they the sexual relationship it leads to different problems like the ability to think in general is decline or it become very minimum or small. In addition, pupil that have sexual friendship is usually go to bed for sexual inter course. For this reason, the income of his family may be destroyed or damaged, his family may be destroyed or damaged, his body may be weight loss, the ability to think low. ...." Moreover, overgeneralization in interpreting and explaining ideas was also problem seen in the student written essay. For instance, in paragraph 1 he stated that "...having sexual friendship is dangerous/ unimportant for all university students word wide without discrimination..." This idea / itself requires research support, or evidence, but he explained without considering it. The words and expressions which were presented in the written essay of student 26 seemed his own, and many of the ideas were not clearly stated and cited. The ideas were also presented there without adequate explanation and rational. For example: in paragraph 1 he explained that "...pupils that have sexual friendship are different from other students by having little grade (GPA)."

About the analysis skill of the student in pre-test 1, when we see his performance to identify the intended and the actual relationship of statements, it was very poor in pre-test 1. Paragraph 2 can be good indicator for this. The student did not clearly show how having sexual friendship itself exposed university student for sexual transmitted diseases. Similarly, in this paragraph, he raised points that did not alien with the main argument he stood to write. In identifying similarities and differences between opposing ideas, nothing was mentioned about opposing ideas and their rationales. He only stated his point of view and rational for it as it has seen in the written essay. Many of his reasons that he constructed to support his argument were unrelated. In addition, some of the reasons lacked clarity to convince readers.

In terms of evaluating skill, the student performance was found weak in pre-test one. For instance, the credibility that he gave for information sources was not good. The points he stated in the written essay seemed as he wrote them without making efficient evaluation on them, as well as nothing was done to evaluate the potential of ideas to convince readers. Moreover, many of the ideas student 26 presented in pre-test one were written without making proper judgment about their relevance and applicability in line with his point of argument. Ideas he stated in paragraph 2 like: "...losing weight and the ability to think low." can be taken as examples.

The student tried to infer ideas in his own way in pre-test one, but many of the ideas he rose seem they were not pertinent thought that helped him to draw reasonable conclusions. To reduce consequences following data, to conjecture alternatives and draw conclusion, as well as to formulate a synthesis of related ideas were given little attention by the student in pre-test one. For example, in paragraph one he explained that "if one person follow a girls, he/she forgets his/her vision or objective" this statement did not answer the question how it is alien with the main argument. Again, in the last paragraph, the way he drew conclusion was only standing from his own rational. It also highly exposed for over generalization. The following explanation was taken from the student written essay to show this problem in practice. "Generally, having sexual friend relationship is not good for university students in general rather it is bad habit."

The student explanation skill in pre-test one was poor. The way he presents was not cogent and coherent enough. The manner he explained ideas from the beginning through the end of his written essay were full of errors. In addition, the technique he stated and justified reasons were not based on evidence and context. We can say many of the ideas he described in the written essay were personal and written without using tangible evidence source. Thus, they were not efficient enough to convince his point of view for the reader in comparison with the opponent view on the argument.

Finally, self-regulation is among the six core-critical skills that students need to have in writing the argumentative essays. But it was the other big problem which was reflected in the student written essay. The very indications for this was the student did not self-consciously monitor and correct his judgments; he did not make a double check through re-calculating his

evidences, as well as he did not reconsider his interpretation, analysis, evaluation, inference and explanation. For example, the idea he generalized having sexual friendship as completely a dangerous thing and a bad habit in the last paragraph of the written essay can be good indicator as the student wrote everything without self-consciously monitoring and correcting his judgments, without making a double check through re-calculating evidences, as well as without reconsidering the way he interprets, analyzes, evaluates, infers and explains ideas in the written essay.

Post-test- 3 of Student 26

ETS Post-test- 3 Essay of Student 26 1/2

Government should not allow all university students to learn in the department they prefer without pre-condition.

Many people argue that government should allow all university students to learn in the department they prefer. This leads them to succeed most in that department and fruitful for themselves and their country. However, I disagree with this idea because if this is possible to all university the choice of students can't be balanced. This leads many students study few departments and other departments may be closed, as the department closed is use for country also it shouldn't be possible to allow students to enter the department they prefer.

The first reason why I say government shouldn't allow students to learn in the department they prefer is many students may prefer few departments. This may lead the job opportunity with that language may be compacted. It means, after students graduate, they start to find a job but it is not easy for all <sup>these</sup> students to get a job. Because, unbalance situation happen between the number of workers the employer organization need and the number of graduate students ~~is~~ from that department.

The another reason why I say government shouldn't allow students to learn in the department they prefer as many students prefer few departments, the other department may be closed. So this results in the country

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Post-test 3 Essay of Student 26

Can't get the benefit she get from this closed department. Because the unchosen departments are first formed for purpose give advantage to the country.

Generally, for all these reason government should not allow student to learn in the department they prefer. It should be given based on their point they scored on fresh man course.

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The critical thinking skills improvement of student 26's after the intervention was analyzed using similar rubric which was used to evaluate pre-test-1, and the results were presented in comparison with his performance in pre- test one. The essay which was randomly chosen for analysis among the three post-tests of students was post-test three as it was presented above. Thus, the results of the textual analysis were evaluated and presented in the following sections again in line with the six core-critical thinking skills in writing.

The student performance in interpreting ideas in post-test three was somehow good when it compared with his performance before intervention in pre-test one. The ideas he stated from the beginning through the end of the written essay clearly showed that he understood the argument, as well as the manner he described the argument had good progress, even if the rationales he used to support his argument had some organizational problems, and it was shallow in explaining the opponent rationales on their argument. For instance, the only rational he explained on the side of the opponent argument was success, and the way he illustrated it was too narrow. Thus, it requires going through other rationales that the opponent groups might consider as reasons through using proper evidence about it. For example, he could write other reason through making alienation with the students' personal need, or talent.

Paraphrasing ideas which were taken from others was good, because he described them using his own words. But many of the points he mentioned there were not taken from others. The ideas he used to support his argument were personal. He did not cite and acknowledge any source. In the written essay, there were statements/ ideas that seem which were obtained from research findings, but the manner he wrote them in the written essay as his own using subject 'I'. For example: in the first paragraph he stated that "the first reason why I say government should not allow students to learn in the department they prefer is....." Again, in the third paragraph he described that "The another reason why I say government shouldn't allow students to learn in the department they prefer is....."

In post-test-3, the analysis skill of the student was very good among others core-critical thinking skills. The student performance in post-test 3 clearly indicated from the beginning through the end of the written essay as he properly identified the actual and the intended inferential relation of statements, he identified similarities and differences between opposing ideas, as well as he tried to construct more convincing reasons to support his argument and to criticize the opponent view relatively/ compared to his performance before the intervention (collaborative writing using Google Docs in pre-test one. For example: problem of job

opportunity and losing advantage from un-chosen department in country level were two main reasons which were given by the student as a rationale for his argument.

In terms of evaluating skill, somehow it was good. In the first paragraph of the written essay, he explained what many people view about the given argumentative issue by identifying his point of argument. This showed as the student give credibility for source of information. The idea he rose as rationale to convince his point of view were very good indicators as the student evaluating skill was improved well in assessing the strength and weakness of ideas in relation to the contradicting ideas. Moreover, the student properly judged the relevance and applicability of arguments, because the two main rationales he used to support his argument were acceptable and they seemed more practical or related to the general reality.

With reference to the student's skill to infer ideas in post-test-3, the way he identifies pertinent thoughts to draw conclusion was good; the manner he educes consequences following data was also good. We can take the student explanation in paragraph two as an example for this. "...when many students learn in the department they prefer, this may lead the job opportunity with that department may be compacted or expose student for unemployment."

In using conjecture alternatives and draw conclusion, it was shallow even if he showed some improvement from his performance before intervention in pre-test one/ 1. In addition, he tried to formulate a good synthesis of related ideas, but the language and its structure he used to synthesize ideas had its own organizational problem/errors. The description which was presented in paragraph 3 can be an example for this. In this paragraph, he tried to synthesize the student department choice in line with the benefits the country loss from the departments which were not chosen by students, and that was good.

In terms of explanation, which is the other core critical thinking skill, he out performed at moderate level in post-test 3. He showed progress in presenting ideas in cogent and coherent manner compared to his performance in pre-test one/ 1. He also stated and justified reason based on the context he knew as evidence. But it indirectly indicated that the explanation and justification he used to support his point of view were more personal. It requires further explanations and justifications which were taken from other credible sources and researches to strengthen his point of argument.

Self-regulation is the fundamental skill among the six core-critical skills, and it includes other sub-skills in it. Therefore, the student's self-regulating performance in his writing was assessed accordingly, and the result was presented in the following section.

Self-consciously monitoring and correcting judgments is one skill under self-regulation. As it has been seen in the written essay, student 26's rationales were good indicators for this. Even if the language he used to narrate/explain was weak, many of the ideas presented there were good. Because the ideas listed there were good manifestations as the student passed through in consciously monitoring and correcting his judgment to convince his point of argument to readers in comparison with rationales of the opponent's view.

The second sub-skill of self-regulation is making double check reasons and recalculating evidences. In line with this sub-skill, student 26's performance after intervention in post-test-3 was also somehow good compared to his own performance in pre-test-1. Because the two main reasons he used to support his point of argument were very strong and highly attached with the issue, or his point of argument. But rationales he explained before intervention in pre-test-1 like: success, sexual transmitted diseases, losing body weight and other reasons were completely wrong and very far from the reality, or unrelated. In other terms, they were very indicators as the written essay largely lack making double check and recalculating evidences.

The other sub-skill of self-regulation is to reconsider their interpretation, analysis, evaluation, inference and explanation. Accordingly, student's 26 overall performance after intervention in post-test-3 clearly showed the student's positive and encouraging progress/ improvement compared to his performance before intervention in pre-test-1. But the student performance in post-test-3 also requires additional reconsideration to bring dramatic change on the student's critical thinking abilities, or skills.

CS Pre-test-1 Essay of student 9

I fully agree with people who believe having ~~the~~ sexual friendship is not good for student at university level. Be-  
cause, attending higher education is not an easy task. It requires focus and adapting oneself to all the situations which happen there independently with the help of our parents.

In making focus to their education, many students are seen decrease in their academic result when they have a sexual friend at university. Because, these students give more emphasis for their relationship over their education. As a result, such students will not be successful in their education and future life as well.

The other thing is, the university context is not appropriate to have sexual friendship besides attending higher education. For example, If unwanted pregnancy occurs, it'll be difficult for students to properly attend their education through overcoming the problem.

Generally, having sexual friendship must be forbidden for university students since it has many negative impacts not only on the students' education but also their life at all.

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tudent 9's written essay was among the essays which selected randomly for this textual analysis. Accordingly, the student written essay was evaluated in terms the core critical thinking skills in writing including: interpretation, analysis, inference, evaluation, explanation, and self-regulation. Hence, the result the evaluation presented as follow alien with each core critical thinking skill.

In terms of interpretation skill student 9 outperformed good. There were clear indicators that students that the student understood the point of argument he stands to develop the essay. The points he stated in the essay were directly alien with his point of argument. In addition, the way described his point of view and his rational for it beginning through end was good. He tried to write the essay general explanation in the introductory paragraph through stating the specific rationales as thesis statements in detail in the second and third paragraph. However, the student totally ignored to write about the opponents' view and their rationales behind. This implies as the writer lacked to understand and see the argumentative issue both sides considering various aspects in convincing his readers. Further, over generalization was the other problem which has seen in the student 9's written essay. For example, in the last paragraph of the essay the student wrote as follow: "Generally, having sexual friendship must be forbidden for all university students since it has many negative impact not only on student education but also their life at all". Firstly, the manner the student explained is in the form of obligation. Secondly, he was completely sure as having sexual friendship has many negative impacts for all university students in their education and life all without citing any tangible evidence, or source.

With reference to the skill to make a proper analysis, it was good. Student 9 tried to identify the intended and the actual relationship of statements in pre-test-1. For example, the manner he explained his rationales starting from broader explanation in paragraph one through breaking it down in to specific rationales in the next two paragraphs could be very informative for this. Further, he clearly showed his position through explaining what he intends to argue and his rational behind even if he lacked to explain the opponents' view and their rationales towards the argumentative issue.

In terms of evaluating skill, student 9's performance was not good in pre-test-1. There are different reasons for this like: the student gave less emphasis for credibility of source of information. For this, the explanations starting from the beginning through end of the essay

seemed more personal, or the writer didn't support ideas with tangible evidences. The essay also lacked to assess and compare the logical strength and weakness of opposing arguments. As it has seen, the essay was only written including the writer's point of argument and his rationales for it. On the other side, the points raised in the essay were seemed relevant and applicable in the existing real-life situation.

In terms of inference skill, the student 9's performance was somehow good. The student attempted to identify pertinent thoughts needed to draw a reasonable conclusion standing from his own point of argument and rational from his perspective was not bad. In writing the essay, the student included ideas he perceived relevant and educe consequences standing from the flow the data he formerly presented as rationales. Over all, with all the limitations which was seen in the written essay like: unable to consider opponents' argument, difficulty to use creditable sources and among others, student 9 tried to develop a good argumentative essay through constructing meaning from his own understanding, and formulating a synthesis of related ideas in to coherent perspective.

In terms of explanation skill, student 9 performed at moderate level in pre-test-1. The student presented his point of argument with his rationales in cogent and coherent way, but the manner he described the argumentative issue was not persuasive for readers since it failed to consider the opponents' view and their rationales behind.

Finally, self-regulation was the other core-critical thinking skill in writing which used to evaluate student 9's pre-test-1. Consequently, it was found as a skill that student 9 largely lacked in pre-test-1 essay. As it has seen in the essay, there was a big problem to analyze and evaluate contradictory ideas. In addition, other difficulties which have seen in the student essay like: lack to support their rationales with strong evidences and not taking others perspective in to account in developing the argumentative essay could be taken as very indicators in which student 9 has written the essay in pre-test-1 without making a double check to examine, correct and confirm his reasons.

CTs Post-test-2 Essay of Student 9

There are some ~~people~~ people who believe "universities should control their students way of life". Their reason behind focus on students who score low in their academic achievement due to spending most of their time at parties, ~~entertainment~~, chewing ~~ch~~, smoking cigarette, drinking alcohol, joking with friends and among others. However, I disagree with their ideas due to various reasons.

The first and basic reason ~~is~~ reason is controlling is not the best mechanism to shape young<sup>er</sup>'s life and behaviour at this level. Research has consistently highlighted the importance of discussing, showing the way and helping them to understand their weakness and strength technically instead controlling them in shaping their behaviour.

The other reason is that most of controlling individuals' life mostly end with negative consequences. For example, children who were grown by conservative parents have low confidence <sup>and evidence</sup> in doing things by themselves. Moreover, they may be exposed to various difficulties when they join university <sup>where</sup> which is far from their parents living area. During this time, negative peer pressure can easily lead them to involve in unwanted behaviour because their parents didn't freely teach and show about every <sup>thing</sup> ~~except~~ except controlling them before they join to university.

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Post-test-test-2 Essay of Student 9

In sum, controlling students' way of life is not a feasible way to shape students' behaviour at university level. Rather I would advice providing sustained livelihood and reproductive health education in developing positive and acceptable behaviour among students. Hence, ~~the~~ basic change have brought through the persons' willingness inside instead of forcing them to do.

The improvement of student 9's critical thinking skills following the intervention was evaluated using the same rubric that was applied to evaluate his performance in pre-test-1. In addition, the findings were compared to his performance in pre-test-1. Therefore, in conducting this textual analysis, post-test-2 essay of student 9 was randomly selected among the three post-tests as previously mentioned. Consequently, the results of the textual analysis were presented in subsequent sections along with the six fundamental critical thinking skills in writing and comparing the student his own performance in pre-test-1.

In terms of interpretation skill, student 9's performance was more advanced when it compared with his performance in pre-test-1. In post-test-2, the points student 9 raised were all relevant, and directly align his point of argument. He was also technically good in stating his point of argument with his rationales for it, and concluding the essay. Moreover, the manner he included the opponents' view with their rationales behind was very good. Hence, including opponents' views and their rationales offer several benefits like, **strengthens argument**: addressing opposing viewpoints demonstrate that the writer has considered multiple perspectives. This can make the argument more robust, as it shows the writer can counter objection effectively. **Builds credibility**: acknowledging opposing views can enhance the writer credibility as a writer. It shows that the writer is knowledgeable about topic and fair-minded which can persuade readers to trust the writer's argument more. **Engages reader**: presenting counter arguments can engage reader by acknowledging their potential concern or belief. This engagement can lead to a more thoughtful and persuasive discussion. **Encourages critical thinking**: by analyzing opposing views, the writer not only strengthen his/her point of argument but also encourages readers to think critically about the issue. This can lead a deeper understanding of the topic. **Facilitates dialogue**: including opponents' views foster a sense of dialogue rather than a one-sided debate. It invites reader to consider different perspectives and encourages open-mindedness. **Clarifies the writer's position**: addressing counter arguments allows the writer to clarify his/her own position more effectively by explaining why he/she disagree opposing views, he/she can highlight strengths of his/her argument. **Enhances persuasiveness**: when the writer effectively refutes opposing arguments, it can make his/her overall position more persuasive, as it demonstrates that he/she has thought critically about the issue and is prepared to defend his/her stance. **Promotes fairness**: acknowledging and addressing opposing views reflects a fair approach to argumentation. It shows respect for different opinions, which can be persuasive in self. Over all, incorporating opponents' view is essential for crafting a well-rounded and

compelling argumentative essay that resonates with a diverse audience. In addition, many of the ideas presented in the essay were evidence based, and were explained without exaggeration, or overgeneralization. Moreover, he tried to clearly detected claims and evidences in his writing in post-test-2 essay. For example, in paragraph two student 9 forwarded his rational for his point of argument supporting with research finding through acknowledging the source.

In terms of analysis skill, student 9's performance was highly improved in post-test-2 when it compared his performance pre-test-1. The indicators for this were: the student identified the intended and actual inferential relationships among statements to express beliefs in his writing. The student also examined ideas, detected and analyzed arguments in his argumentative essay. Further, from the onset, the student tried to show the similarities and differences of ideas in developing persuasive argumentative essay. Moreover, as it has seen in the essay, the student well drafted the relationship of sentences, and or paragraphs to each other and the main purpose of his argumentative essay from beginning though end of the essay. Finally, the way the student constructed convincing reasons to support or criticize a given argumentative idea, and reach a strong conclusion was very good even if it somehow lacked a detailed explanation to clarify more. For example, paragraph two requires more explanations to show the relationship between the student rationales as a writer for his point of view and the research finding which was presented in paragraph two to support the writer's rationales and against the opponents' point of argument. Student 9 simply presented his rational and the research finding as there are without making efficient discussion and critical analysis on them.

With reference to evaluating skill, student 9 also show good improvement in relative with his performance in pre-test-1. There are evidences in post-test-essay of student 9 that show as he determined the source of information while he gathered data on his writing topic. For example, in paragraph two the research finding he used to support his rational was very appropriate in strengthening and emphasizing his point argument to convince readers. The essay was also good in assessing and comparing the logical strengths and weaknesses of opposing arguments, but it ignored to show the strengths of opposing arguments in the essay. In this regard, the student only explained the opponents' point of argument and their rationales for it. On the other side, evidences presented in the essay did not contradict each other, rather all of the evidences strengthened the writer's point of argument and the essay conclusion ideally. Moreover, student 9's argument and his point of rationales for it were more relevant and applicable in real life

situation. In sum, it implied that student 9's skill to evaluate, or judge was significantly enhanced in writing argumentative essays in post-test-2 after the intervention of academic Web-based projects via Google Docs.

Inference is the other fundamental critical thinking skill in writing, and it was used to evaluate student 9's post-test-2. As a result, the student developed a very good and highly advanced essay compared to the essay the student developed in pre-test-1. Hence, in post-test-2, student 9 properly identified pertinent thought that aids him a reasonable and strong conclusion as it has seen in the essay. He also developed the essay incorporating relevant information and educing consequences following the flow of their data. Further, the essay as was very informative, as student 9 has written the essay through making proper question about his evidence, conjecture alternatives and draw conclusion accordingly. For example, the idea stated in concluding paragraph in post-test-2 essay of student 9 was unique and very critical in magnifying the writer point of argument to convince readers.

In terms of explanation, student 9 outperformed better in post-test-2 when compared with his performance in pre-test-1. The student presented his point of argument in cogent and coherent way. In addition, he stated and justified reasons with valuable evidence and contextual example. For instance, as it has seen in the essay, paragraph two, he tried to support his first rational with research finding, and in paragraph three of the essay, he also tried to support his second rational providing contextual example. Besides, the student presented his reasons in form of persuasive argument. As it has seen in the essay, student 9 attempted to convince readers to adopt a particular view point through presenting reasons, evidence and emotional appeals in the manner influencing their thoughts and feelings. However, still the essay lacked detailed explanation in answering the question how, and clarifying relationship between the writer's rationales for his point of argument, and the research finding which was presented in the essay to strengthen the writer's rationales. Paragraph two can be a good example for this. " The first and basic reason is controlling is not the best mechanism to shape youngster life and behavior at this level." This idea under the quotation mark was taken from the student 9 pre-test-2 it is without further explanation. Nothing was made to answer the question 'how?'. Again, following this quoted statement, a research finding was presented there excluding additional illustration that clarify the relationship between the writer rational, and the research finding, as well as to show how the research finding supports the writer's rational. the following quoted statement was taken from

student 9 post-test-2 essay, paragraph 2, line 3 to 6, in order to show these ideas in practice. “Research has consistently highlighted the importance of discussing, showing the way and helping them to understand their weakness and strength technically instead controlling them in shaping their behavior.”

Finally, student 9 outperformed better in terms of self-regulation compared to his performance in pre-test-1. In this instance, the essay was very informative, as the student has written the essay in post-test-2 through making good analysis and evaluation on contradictory ideas. In addition, points raised in the essay indicated that, as student 9 has developed the essay through making a double check to examine, correct and confirm his reasons.

#### 4.1.1.6. Focus Group Discussion Results on Students’ Critical Thinking Skills

The focus group discussion result revealed that academic Web-based projects/tasks using Google Docs enhanced students’ critical thinking skills in writing including interpretation, analysis, evaluation, inference, explanation and self-regulation. Many of the participants explained that they had brought good progress in their critical thinking skills. In relation to this, most participants in the FGD mentioned specially, the platform was very suitable to develop their critical thinking skills through working together on argumentative essay writing tasks/projects. According to them, they explained, as it enabled them to get necessary evidences which were helpful for them interpreting, explaining, analyzing, evaluating, inferring and self-regulating the given writing tasks independently. Standing from these instances, one participant student in the focus group discussion stated:

*When I evaluate my critical thinking skills after intervention, I can say, I have seen good changes. Specially, in the manner I evaluate issues/ points for my writing, the way I explain my point of argument as a writer supporting with good evidences since Google Docs gives good opportunity for this. In addition, it helps me to develop my inference and analysis skills through sharing ideas for my group mates. As a result, now, I can write argumentative essay independently through regulating my writing myself.*

As the FGD report showed that most participants share as the intervention enabled them to easily understand the writing content/ task/project, and helped them to express their ideas using

the necessary evidences. As a result, they explained it was good in guiding them to explain arguments, supporting their writing with reasonable rationales, as well as in drawing their writing with strong conclusion. However, the challenges they faced using Google Docs to work on academic Web-based collaborative writing tasks/ projects made them to bring a dramatic change on their critical thinking skills in writing. In line with this one of the participants mentioned:

*As we are English major students, we are expected to critically write texts and evaluate the given text critically for the future. In achieving these objectives, working on academic Web-based collaborative writing projects/tasks using Google Docs can be the best way if challenges are mitigated to use it properly by all students. It can also be used besides with the conventional way learning until challenges are totally solved/ avoided.*

Generally, all the above explanations indicated that the intervention/ academic Web-based project/ Web-based collaborative writing instruction specifically, via Google Docs has had its own positive effect on students' critical thinking skills in writing even though the limitation they faced during the implementation/ in using Google to do writing tasks/ projects collaboratively largely influence in hindering their overall critical thinking skills achievement not to be at the desired level.

#### 4.1.1.7. Diary Analysis Results on Students' Critical Thinking Skills

The students' diary analysis reported that using academic Web-based projects, or Web-based collaborative writing instruction specifically, via Google Docs had improved students critical thinking skills in writing. All participant students in their diary mentioned that using Google Docs to do collaborative writing tasks was new for them. However, most of them explained it only requires adjusting problems in line with internet connection, and fulfilling the necessary devices, as well as creating a lot of exposure for practice using it like the familiar applications, they use in their everyday life for entertainment purposes. Due to these rationales, some students stated as it was a very indicator to see the improvement of their task accomplishments from session to session.

In line with this, as one of the students in her diary stated:

*The novelty of Google Docs to do collaborative writing tasks itself from the beginning make me to start practicing and developing my critical thinking skills. When I ask myself about the app, when I examine what differ it from other apps, and When I practice to use it properly. In addition, the given argumentative tasks/projects and working on them collaboratively give me the opportunity to have progress in my critical thinking skills. Moreover, the teaching material guide me to easily work on the given writing tasks collaboratively using Google Docs in order to develop my critical thinking skills. Because the techniques presented there were very supportive for my writing practice using online learning/ via Google Docs since I write my first draft on rough paper before I share to my friends online using the app.*

The above student's direct explanation, as well as many of the participants students' idea which was presented in their diary revealed that, working collaboratively on writing tasks, particularly in producing an argumentative essay using Google Docs has had its own contribution in their critical thinking skills. The reason behind it, according to them were, making them to write a critical argumentative essay/text, and evaluate the given text critically required them to pass through asking about the given argumentative point/ issue, discussing with their group mates and teacher about the issue, as well as looking for information about the issue. And all these processes were facilitated using Google Docs. As a result, from this one can understand that as the intervention directly aid them in promoting their critical thinking skills in writing including interpretation, analysis, evaluation, inference, explanation and self-regulation.

The other participant student mentioned:

*After intervention, my thinking to produce/ construct good and effective essay is improved. It helps me to produce an essay that included its necessary parts like: (introduction, body and conclusion), it helps me to support my point of argument with reasonable rationales to convince readers, because it helps me to easily find information for my writing using different options like: the internet, search engine etc. Moreover, it provides me the opportunity to improve my writing ability through evaluating my own work, and using my friends and teacher feedback in sharing my work with them easily without time and place boundary.*

Thus, from the diary analysis we can understand that that working on academic Web-based projects using Web-based collaborative instruction specifically, via Google Docs has had its

own positive effect in developing students' critical thinking skills in writing.

All in all, the findings obtained through tests, textual-analysis, focus group discussion, and students' diary analysis on students critical thinking skills indicated that the academic Web-based projects specifically, via Google Docs had a positive effect on students' critical thinking skills including interpretation, analysis, evaluation, inference, explanation and self-regulation. In other terms, collaborative writing using Google Docs has improved students critical thinking skills which were mentioned earlier.

#### 4.1.2. Students' Motivation towards Writing

##### 4.1.2.1. Questionnaire Results on Students' Motivation

This sub-section presents the questionnaire results gained through descriptive statistics and paired samples t-test statistics after investigating the students' writing motivation in terms of the four motivational aspects including: self-efficacy, achievement goals, beliefs about writing, and affect about writing according to (MacArthur et al., 2016).

#### **Descriptive statistics results of students' motivation before and after the Intervention**

**Table 8: Means and standard deviations of students' motivation before and after the intervention**

Pairs	Items	Tests	Mean	N	Std. Deviation
Pair 1	Self-efficacy of writing	Pre-intervention	3.49	35	.37
		Post-intervention	3.97	35	.42
Pair 2	Goal Orientation of writing	Pre-intervention	3.61	35	.47
		Post-intervention	4.07	35	.58
Pair 3	Belief about of writing	Pre-intervention	3.76	35	.46
		Post-intervention	4.02	35	.54
Pair 4	Affect about Writing	Pre-intervention	3.57	35	.56
		Post-intervention	3.80	35	.41

The descriptive statistics results presented in Table 8 shows that the Mean scores of the post-tests were higher than the Mean scores of the pre-tests in each pair or for all motivational aspects, indicating that academic Web-based projects using Google Docs positively impacted students' writing motivation. Specifically, the largest improvement was observed in self-efficacy of writing, with a mean increase of 0.48 (pre-intervention mean = 3.49, post-intervention mean = 3.97). This was followed by goal orientation, with a mean increase of 0.46 (pre-intervention mean= 3.61, post- intervention mean = 4.07). Belief about writing and affect about writing also showed increase, with mean differences of 0.26 and 0.23, respectively.

In addition, the standard deviations ( $SD < 1$ ) for both pre- and post- intervention scores indicating that the improvements were consistent across the group. It implies that the students' motivation increased after the intervention. Thus, it can be understood that academic Web-based projects using Google Docs in writing class increased students' self-efficacy, goal orientation, and belief and affect about writing which are the core elements of motivation.

#### Paired samples t-test results of students' motivation before and after the intervention

**Table 9: Paired samples t-test result of students' motivation before and after the intervention**

	Items	Tests	Mean	Std.	Std.	T	df	Sig.
Pair 1	Self-efficacy of writing	Pre-intervention		Deviati on	Error Mean			(2-tailed
		Post-intervention	-.47429	.36002	.06085	-7.794	34	.000
Pair 2	Goal Orientation of writing	Pre- intervention	-.45714	.53042	.08966	-5.099	34	.000
		Post- intervention						
Pair 3	Belief about of writing	Pre-intervention	-.25714	.41888	.07080	-3.632	34	.001
		Post-intervention						
Pair 4	Affect about Writing	Pre-intervention	-.22571	.49548	.08375	-2.695	34	.011
		Post- intervention						

The paired samples test table, table 9 presents the paired sample t-test results, which confirmed the statistical significance of t improvements among the four motivation dimensions. The negative mean differences reported in the table reflect the calculation method, where post-intervention means were subtracted from pre-intervention means, emphasizing that post-test scores were higher. For example, in the self-efficacy dimension, the mean difference was -0.474, with a highly significant t-value of -7.794 ( $p < .05$ ). Similarly, the mean difference for goal orientation was -0.457, with a t-value of -5.099 ( $p < .05$ ). Belief about writing and affect about writing also showed significant mean differences of -0.257 ( $t = -3.632, p < .05$ ) and -0.226 ( $t = -2.695, p < .05$ ), respectively.

These findings clearly demonstrate that using academic Web-based projects significantly enhanced students' motivation towards writing. The improvements were most pronounced in self-efficacy and goal orientation, but belief and affect about writing also benefited from the intervention. The results highlighted the potential of academic Web-based collaborative projects/tasks, using Google Docs in fostering a more motivated and engaged collaborative writing environment.

#### 4.1.2.2. Focus Group Discussion Results on Students' Writing Motivation

In the focus group discussion students reported that collaborative writing using academic Web-based projects via Google Docs had increased their motivation with reference to their willingness and preference towards writing. According to students' response, they were interested in doing tasks, or projects collaboratively using Google Docs. In addition, they explained as it was more preferable and attractive than the familiar/ convention way of learning/ face-to-face learning since it allowed each student to develop his/her writing skill through sharing ideas and comments with their group mates and teacher easily.

Besides, they described that practicing the skill without time and place boundaries had increased their motivation or made them to be more attracted by the new method of using academic Web-based projects via Google Docs.

Moreover, they stated as it provided them multiple opportunities to find evidence for their writing using different sources like internet, search engine and others. In relation to this, they stated, as this feature/benefit of Google Docs in writing their argumentative essay collaboratively makes simple and interesting. As a result, they enabled to freely discover topic for their writing and produce their own essay accordingly.

Overall, results of the focus group discussion showed that the students' motivation towards writing had improved after they participated on academic Web-based collaborative writing projects/ tasks specifically, using Google Docs.

#### 4.1.2.3. Student-Diary Analysis on Students' Writing Motivation

The data that obtained through students' diary analysis indicated that the students' writing motivation improved when they used academic Web-based projects specifically, via Google Docs. Many of them in their diary explained that collaborative writing using academic Web-based projects/ tasks specifically, via Google Docs were found interesting and develop their writing skill as well.

One of the students reported that:

*Collaborative writing using Google Docs makes the process of writing easy and entertaining, because many of we students are spending lot of time with our smart phone for different purposes. Thus, it provides us great opportunity to practices the skill through working together with our friends in the place and time we prefer.*

Another student also stated her feeling about collaborative writing using Google Docs. Her diary account can be read as follow:

*We are students of the 21<sup>st</sup> century, so we need to learn in the way that fits the time and situation. Therefore, academic Web-based projects using Google Docs for me is an interesting and innovative approach that fills the gaps of the conventional way of learning (face-to-face collaborative writing approach) like shortage of time to work and complete the given writing tasks collaboratively.*

From her response above can infer that academic Web-based projects/tasks via Google Docs was highly accepted by the student, and it had its own role in increasing students' motivation towards writing.

However, the students in their diary also did not forget to explain challenges that indirectly influence their motivation in using Google Docs to do the collaborative writing tasks like: lack of technical skill to use it actively and properly, lack of qualified device to apply it, as well as

weak internet connection were listed as major factors that influenced the whole teaching learning process from beginning through end working collaboratively on academic Web-based writing tasks/projects specifically, using via Google Docs.

Particularly, around four students explained using smart phone to learn essay writing was boring since it did not make them to write quirkily what they drafted on the paper. Therefore, they suggested using computer instead of smart phone to avoid the problem.

#### *4.2. Discussion*

This study aimed to examine the effects of Web-based projects/tasks using Google Docs on students' writing performance. The findings revealed a significant improvement in students' writing performance after engaging in academic Web-based based collaborative writing activities, particularly using Google Docs. Specifically, task achievement, coherence and cohesion, lexical resources, and grammatical range and accuracy, and all showed measurable increases.

The observed increase in academic writing skill aligns with Vygotsky's (1978) theory of social interaction in learning, suggesting that collaborative tools like Google Docs enhance engagement through peer collaboration and interactive feedback. Further, the students' writing performance in the current study was improved as the result of academic Web-based projects, specifically employing Google Docs, because it was a method that provides multiple opportunities for the learners like it helped them to get feedback from their peers on their grammar, spelling, and punctuation. This also can help students to identify and correct errors in their writing. It helped students to collaborate on brainstorming ideas and developing essays. It also helped students to come up with more original and well-developed ideas. In addition, students could use Google Docs to track their progress and make changes to their work in real time. This could help students to stay on track and to produce high-quality work. Moreover, students could share their work with their teacher for feedback. As a result, students improved their writing skills over time since most of the activities in the writing classroom can be performed via Google Docs through: drafting, revising, peer editing, collaborating and providing feedback. So, students can work through the same draft and the teacher can check in and provide immediate feedback at any point while the process of writing or, after the process of writing without time and place boundary.

Similar to this research finding, the studies conducted by Kessler (2013), Baker et al. (2020) and Huang et al. (2020) consistently demonstrate the significance of using online collaboration on students' writing performance. Some of the key findings from these studies include online technologies can support collaborative writing through providing students with tools to share documents, communicate with each other, and provide feedback on each other's work. In addition, collaborative writing can help students to improve their writing skills by giving them opportunities to learn from each other, to practice giving and receiving feedback, and to revise their work. In relation to these key findings, there are some specific previous researches on using online technologies with collaborative writing like a study by Aydin and Yildiz (2014) which found that students who used wikis to collaborate on writing tasks outperformed students who wrote individually on the same tasks. Similarly, a study by Bikowski and Vithanage (2016) reported that students who used web-based collaborative writing tools improved their individual writing scores more than students who did not use these tools. More particularly, Suwatarathip and Wichadee (2014) reported that students in Google Docs group gained higher mean scores than those working in groups in face-to-face class-room. In the same way, the study by Moonma (2021) revealed that students in online collaborative writing co-produced texts better than in face-to-face mode. Moreover, other study which was conducted by other corresponding authors reported that technology/Web-based learning, specifically using Google Docs facilitated the process of working collaboratively on writing tasks/projects, as well as collaborative writing was effective in improving accuracy of students writing (Talib & Cheung, 2017).

However, unlike to the finding of these studies, online technologies might also lead to unpleasant learning experiences. For instance, both students and teachers may feel uneasy about sharing their knowledge. Students might think it is inappropriate to alter their peers written work, and there could be disparities in how much each person contribute to the assignment. Research has shown that not all students equally collaborative setting. Some students may dominate the discussion, while others may not participate fully, leading to lack of engagement and potentially poorer writing outcomes for less active participants (Coyle, 2007). Online collaboration might also lead to distraction, as students may engage in off-task behaviors like, chatting using other tabs while working on their writing. The quality feedback can be the other drawback of online collaboration. While peer feedback is a critical component of collaborative writing, some studies suggest that the quality of feedback provided by peers

may not always be constructive or helpful, which can hinder writing performance. In addition, technical difficulties or lack of familiarity with the platform can disrupt the writing process, and negatively impact students' performance. The same is true for participant students in the current study. Specifically, many of them faced technical difficulties in using Google Doc to work on writing task/projects collaboratively (Hew et al., 2014; Liu et al., 2019; Kumar et al., 2020)

Study was also conducted to look at error of online collaborative writing using Google Docs and face-to-face collaborative writing. As a result, 346 errors were discovered in online mode, while 389 errors discovered in face-to-face mode, which was at higher level. Time independency and features of Google Docs might be the crucial factors which facilitated the students writing in online mode (Moonma, 2021). Similarly, in the current study further investigation was made to see their improvement in filling their gaps in writing argumentative essay through conducting a textual analysis on students written essays before and after intervention. So that, students showed significant change on their writing performance in correcting many of their writing errors that happened before intervention. As well as, participant students also reported in their diary about the role of Google Docs in facilitating the collaborative process along with the unpleasant situations they faced during the intervention/ the process like lack of technical skill, problems in line with using appropriate device, and internet access. With reference to using Google to do collaborative writing projects, many of the participant explained it was difficult for them since it is new for them and can't experience it with short period of time due to lack of trend in using it, and other related factors. However, participant students in other study perceived that collaborative writing using Google Docs is easy to use (Suwatarathip & Wichadee, 2014). Therefore, it is a very indicator that students in the current study require further and regular training until they efficiently start to use Google to do collaborative writing projects properly and it also needs working a lot on mitigating challenges that influence the process negatively. In linking to these, there are three basic pre-conditions that need to be fulfilled in using Google Docs to do collaborative writing projects in order to improve students writing performance. First, students must have access to Google Docs. This means that they must have a Google account and an internet connection. Second, students must be familiar with the basic features of Google Docs. This includes how to create, edit, and share documents. The third, and the final pre-condition is, the teacher/ instructor must create a Google Docs document for each collaborative writing activity/project. The document

should be shared with all of the students who will be collaborating on the activity.

Results of the current study also revealed that collaborative writing using academic Web-based projects, specifically employing Google Docs promoted students' critical thinking skills in writing including: interpretation, analysis, inference, evaluation, explanation, and self-regulation. The observed improvement in critical thinking skills linked with Vygotsky's (1978) theory of social interaction in learning, suggesting that collaborative tools like Google Docs enhance engagement through peer collaboration and interactive feedback. In addition, Web-based Collaborative writing instruction/ academic Web-based projects/tasks using Google Docs was found a powerful method for empowering critical thinking skills in students in the current study since students had the opportunity to work together to write a piece of text, they could share ideas and perspectives. Therefore, students could develop their critical thinking skill through learning from each other's different ideas and perspectives. They also analyzed and evaluated information through working together to analyze and evaluate information from a variety of sources, this could help them to develop their critical thinking skills and to form their own opinions. It also allowed students in working together to construct arguments and to support their arguments with evidence, this could help them to develop their critical thinking skills and to become more persuasive writers. In addition, it helped students in reflecting their own thinking. They could reflect on their own thinking and on the thinking of their peers, this in turn could help them to develop their metacognitive skills and to become more critical thinkers. Consequently, learners improved their critical thinking in writing including all the sub-skills under it: interpreting, analyzing, evaluating, inferring, explaining, and self-regulate.

Likewise, studies which were previously conducted by different researchers reported that Web-based collaborative writing instruction/ academic Web-based projects using Google Docs had a positive effect on students' critical thinking skills. For example: a study by Talib and Cheung (2017) reported that academic Web-based projects/tasks was effective in improving students' critical thinking skills, and their writing performance as well. Various studies which have been conducted by different researchers in different time highlighted collaboration via Google Docs enhances students' critical thinking skills in writing through encouraging peer feedback, discussion and shared problem-solving tasks (Kessler, 2009; Hawang et al., 2011; Zheng et al., 2015). In addition, a meta-analysis conducted by Li et.al. (2018) indicated that online collaborative writing can significantly improve students' critical thinking abilities and writing performance in writing contexts.

However, there are findings that reported that negative impact of using Web-based collaborative instruction/ academic Web-based instruction Via Google Docs on students' critical thinking skills in writing. For example, some studies suggest that collaborative writing tool can lead to superficial engagement with the material, students may focus on more formatting and editing rather than developing deeper critical thinking skills. Collaborative environment can sometimes foster group thinking, where students conform to dominate ideas rather than critically evaluating different viewpoints, this can inhibit the development of individual critical thinking skills. The other drawback can be, the ease of using tools like Google Docs might lead to rely too heavily on the technology for organization and structure, which potentially stunting their ability to think critically about their writing. In addition, as mentioned above, the feedback provided by peer in a collaborative setting may not always constructive. Poor quality feedback can hinder the development of critical thinking skills as students may not receive the necessary challenges to their ideas. As well as, the online environment can lead to distractions that detract from students' ability to focus deeply on their writing tasks, which is essential for critical thinking (Hawang et al.,2011; Zheng et al., 2015; Li et al., 2015; Kumar et al, 2020).

According to Cottrol (2005), the ability to think critically is not something that we inherited from our parents genetically, rather it is learned. Therefore, it requires practice and experience, specifically working in a collaborative setting actively, and facilitating the process of collaboration through integrating/supporting it with online technology like using Google Docs since it helps to easily develop students' critical thinking ability (Smith & MacGregory, 2009; Talib and Cheung, 2017). However, in helping students to develop their critical thinking skills, teachers need to be technical in using the necessary strategies and preparing appropriate academic Web-based collaborative projects/tasks that help students to develop their critical thinking skills in writing.

There are some specific strategies that teachers can use to empower critical thinking skills through Web-based collaborative writing instruction/ academic Web-based projects via Google Docs. These are: first, it requires providing students with opportunities to collaborate on a variety of writing tasks. This will help students to develop their critical thinking skills in a variety of contexts. Next, encouraging, students to use the comments and chat features in Google Docs to communicate and collaborate with each other. This will help students to share ideas, to give and receive feedback, and to work together to develop their arguments. Then,

using Google Docs templates, to provide students with a structure for their writing. This can help students to focus on the critical thinking aspects of the writing process, such as developing a strong argument and supporting their arguments with evidence. Finally, using the revision history feature in Google Docs, to track students' progress and to provide them with feedback on their critical thinking skills. This will help students to identify areas where they need to improve and to develop their critical thinking skills over time (Zheng et al., 2015).

The other thing that teachers need to know is about academic Web-based collaborative tasks/projects. Not every activity is appropriate to enhance learners' critical thinking skills through collaborative writing via Google Docs. The following are some specific examples of collaborative writing projects/ activities that teachers can use to empower students' critical thinking skills: have students work together to write a persuasive essay on a current event. Students can research the topic, brainstorm arguments, and write a collaborative essay in Google Docs. The other example can be, have students work together to create a presentation on a complex topic. Students can research the topic, divide up the work, and create a collaborative presentation in Google Slides. In addition, have students work together to write a script for a short film or play. Students can brainstorm ideas, develop characters and plot, and write a collaborative script in Google Docs. Overall, using these strategies and activities, teachers can help students to develop their critical thinking skills through Web-based collaborative instruction/ academic Web-based projects using Google Docs. Because, critical thinking skills are essential for success in school and in life, and collaborative writing can be a fun and engaging way for students to develop these skills (Hawang et al.,2011).

The other major finding that obtained through this study was about students' motivation towards writing which demonstrated that academic Web-based projects specifically; employing Google Docs had positive effect on students' writing motivation. In other terms, it revealed that students' motivation promoted in terms of the four dimensions of motivation including self-efficacy, achievement goals, beliefs and affects about writing after the intervention of Web-based academic projects via Google Docs. Specifically, self-efficacy, goal orientation, beliefs, and affect towards writing all showed measurable increases. The most pronounced improvement was observed in students' self-efficacy and goal orientation, highlighting the tool's potential to foster confidence and purpose in writing.

The observed increase in motivation aligns with Vygotsky's (1978) theory of social interaction

in learning, suggesting that collaborative tools like Google Docs enhance engagement through peer collaboration and interactive feedback. In addition, Web-based collaborative instruction/academic Web-based projects/tasks using Google Docs can have positive effects on students' writing motivation in a number of ways. The first way can be, through making writing more fun and engaging. When students work together on a writing project, they have the opportunity to share ideas, brainstorm solutions, and give each other feedback. This can make the writing process more enjoyable and motivating for students. The second way can be, through making students to feel more supported. When students know that they have classmates to rely on for help and support, they are more likely to feel motivated to write. Google Docs makes it easy for students to collaborate on writing projects and to get help from their classmates when they need it. The third, and the other way can be, through helping students to see the value of their writing. When students work together to create a piece of writing, they can see how their individual contributions contribute to the overall product. This can help students to see the value of their writing and to become more motivated to write. These findings are consistent with earlier research by Lam and Pennington (1995), Moonma (2021), Kitjaroonchai and Suppasetsee (2021), and Woodrich & Fan (2017) which also highlighted the role of technology in fostering writing motivation and creativity.

Likewise, previous studies which were conducted by Suwatarathip and Wichadee (2014) and Talib and Cheung (2017) using different methods revealed that students developed positive attitude towards collaborative writing using Google. Particularly, the study which was conducted by Blankenship and Margarella (2014) on students' motivation reported that students were motivated and engaged in learning when using a technology-supported learning environment. In the same fashion, in the current study, students showed good improvement in their motivation towards writing argumentative essays after intervention or the manipulation of Web-based collaborative instruction/academic Web-based projects/tasks using Google Docs. However, unlike these studies, some participants in the present study encountered challenges, such as technical limitations, device-related issues, and weak internet access, which influenced their experiences.

In relation to this, the study also explored students' experiences in using Google Docs to work on collaborative writing tasks. Students expressed a strong preference for this approach, noting its appeal and effectiveness compared to conventional face-to-face methods. They valued the flexibility of working without time and place restrictions and appreciated the

opportunity to share ideas and receive feedback easily from peers and instructors. This finding supports Zioga and Bikos (2020), Valizadeh (2022), and Suwantarathip and Wichadee (2014) who emphasized the motivational benefits of technology integration in collaborative learning. However, the challenges identified in this study and explained above, such as: lack of technical skills and device limitations, were consistent with the frustrations noted by Warschauer et al. (1998).

Halsely (2007) recognized that all students might not prefer using technology as the best technique, but notes that their enthusiasm will be higher when they know there is a motive behind their writing and posting their works on the internet. The students' motivation and responsibility will keep increasing when they understand that there are real readers who will read their writing works. In the same manner, in the current study, around two participant students explained as a method they prefer the conventional over the new method/academic Web-based projects since they totally don't have experiences in using technology for learning, but through time they illustrated as they attracted by the method due to the app/ Google Docs facilitate the collaborative process by filling the gap of the face-to-face collaborative writing in line with time and place. In addition, they reported they feel motivated when they think they are sharing their writing work to their friends, and teacher online. Hence, teaching writing, specifically, using Google Docs in the collaborative learning environment in and out of the classroom is an effective way to encourage/ increase learners' writing motivation (Zhu, 2012; Kinzer, 2010).

In spite of the advantages, using technologies in academic setting, its degree of success of any application of word processing in an ESL setting will ultimately be determined by the nature of the users and the circumstances of use, rather than directly by the attributes of the medium (Pennington, 1991). In relation to this, participant students in the current study explained their experiences including (challenges/unpleasant situations and suggestions) using Google Docs in doing academic web-based collaborative writing projects. According to them, conditions like: lack of technical skills, weak internet access, and lack of appropriate devices were the main challenges in the process of using Google Docs to do academic web-based writing projects collaboratively even if they witnessed it was a method that initiated them to learn writing through facilitating the process of collaboration without time and place boundary. In the same way, participant students in Moonma's 2012 study reported overall positive feedback towards Google Docs and they found it useful in terms of writing anywhere and anytime.

However, participant students in the current study specifically reported that using smartphone to practice writing at essay level made the process boring since it was not comfortable in typing the writing draft quickly to share for their friends online. Standing from this instance, they suggested using computer or any other advanced devices instead of smart phone to practice writing at essay level.

Overall, Web-based collaborative writing instruction/ academic Web-based projects using Google Docs can be a valuable tool for increasing students' writing motivation. It can make writing more fun and engaging, help students to feel more supported, and help students to see the value of their writing. But there are things that teachers need to do in using Google Docs in order to enhance students' writing motivation. The 1<sup>st</sup> one is, choosing and preparing tasks/projects that are appropriate for collaborative writing since not all writing tasks are well-suited for collaborative writing using web-based learning. For example, tasks that require students to demonstrate their individual writing skills, such as personal essays, may not be appropriate for collaborative writing. The 2<sup>nd</sup> one is, grouping students strategically. When grouping students for collaborative writing activities/projects, consider factors such as learning styles, interests, and abilities. The 3<sup>rd</sup> one is, providing students with clear instructions and expectations. Students should know what they are expected to do and how they will be assessed. The 4<sup>th</sup> one is, encourage students to give each other feedback. Feedback can help students to improve their writing skills and to become more confident writers. The 5<sup>th</sup> and the final one is, celebrating student successes. It is important to celebrate student successes in collaborative writing activities. This will help to motivate students and to create a positive classroom environment.

In sum, it is worth mentioning that Web-based collaborative writing instruction/ academic Web-based projects/tasks, specifically via Google Docs was effective to develop students' academic writing performance and critical thinking skills and increase students' motivation towards writing. Consequently, these results carry significant practical implications for teaching English as a foreign language (EFL). Therefore, EFL teachers could incorporate academic Web-based projects/tasks using Google Docs into their teaching strategies to enhance students' writing performance, critical thinking skills and motivation. However, to maximize its potential, it is essential to address the technical challenges and provide adequate training and resources. Moreover, this study suggests that while Google Docs fosters collaboration and engagement, its implementation needs to be thoughtfully planned to mitigate challenges and ensure inclusivity.

## CHAPTER FIVE

### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter presents summary of the study, concluding remarks of the major findings, and informative recommendation forwarded based on findings of the study.

#### 5.1. Summary

The main objective of the study was to investigate effects of academic Web-based projects on EFL students' academic writing performance, critical thinking skills, and writing motivation. In achieving this objective, a single group quasi-experiment time-serious design was used. A total of 35 (30 male and 5 female) second year English major students, enrolled in advanced English course, at Woldia University participated in this study. Comprehensive sampling technique was used to select participants. Test, questionnaire, textual analysis, focus group discussion and students' diary analysis were employed to collect data from participants. *One-way repeated measure* MANOVA, paired sample t-test, and descriptive statistics were used to analyze the quantitative data. On the other hand, the qualitative data was analyzed through thematic analysis. Specifically, Google Docs was employed in this study among other web-based writing applications.

Results demonstrated a significant difference between learners' academic writing performance, critical thinking skills, and writing motivation before and after the intervention which suggests that academic web-based projects specifically, using Google Docs positively influenced students' academic writing performance, critical thinking skills, and writing motivation. Particularly, the descriptive statistics results indicated that the student' mean scores in the post-tests were greater than those of the pre-tests which implies academic Web-based projects using Google Docs had its own role in improving learners' academic writing performance, critical thinking skills, and writing motivation. The MANOVA statistic result also showed that there were significant effects of academic Web- based writing projects using Google Docs on both the dependent variables (writing performance and critical thinking skills), however; some of the insignificant findings obtained through pairwise comparison between pre-tests and the first two post-tests indicated that highly experiencing the intervention is a must to bring a desired change on students' writing performance and critical thinking skills.

The textual analysis results also reported that students had showed good progress in the post-test essays compared to the pre-test essays in their writing performance in terms of task achievement, coherence and cohesion, lexical resources, and grammatical range and accuracy as result of academic Web-based projects, specifically employing Google Docs. Likewise, the results of the textual analysis revealed that students had performed well in the post-test essays compared to pre-test essays in their critical thinking skills in writing including: interpretation, analysis, evaluation, inference, explanation and self- regulating.

The paired samples t-test statistic result on students' writing motivation showed that students' mean score after the intervention was greater than the students' mean score before the intervention in each pair. It implies that academic Web-based writing projects via Google Dos had a positive effect on students' motivation towards writing including: self-efficacy, goal orientation, belief, and affect about writing. Particularly, the most significant improvement was seen in students' self-efficacy and goal orientation. In addition, the students in their focus group discussion and diary (diary analysis) proved the significant role of academic Web-based projects, specifically via Google Docs in developing their writing performance and critical thinking skills, and in promoting their writing motivation since it helped them to practice the skill with unlimited exposure in place and time. Besides, participant students suggested the need to work on mitigating the unpleasant situations which encountered during the learning process to bring a dramatic change in all the three variables through employing academic Web-based projects using Google Docs, and other related writing applications. Overall, the findings of the study revealed that academic Web-based projects specifically, via Google Dos improved the students' writing performance and critical thinking skills, and increased their motivation towards writing.

## **5.2. Conclusion**

This study examined the impact of academic Web-based projects using Google Docs on undergraduate EFL University students' academic writing performance, critical thinking skills in writing and their motivation towards writing. The findings demonstrated that working collaboratively on Web-based academic writing tasks specifically, via Google Docs significantly enhanced students' academic writing performance, critical thinking skills and

motivation. These improvements underscore the potential of collaborative online tools to create engaging and purposeful learning environments. In addition, the findings of this study specifically, on students' writing performance and critical thinking skills was also very informative that let students to adapt themselves with the intervention properly through unlimited practice exposure and appropriate technical training is a key to bring a dramatic achievement using academic Web-based projects.

Particularly, the first major finding of the study revealed that students improved their academic writing performance in terms of task achievement, coherence and cohesion, lexical resources, and grammatical range and accuracy. Further, they were able to compose a good essay through properly developing topic sentences, thesis statements, and supportive ideas.

The second major finding described that collaborative writing using academic Web-based projects specifically, via Google Docs had positive effects on students' critical thinking skills in writing including interpretation, analysis, evaluation, inference, explanation, and self-regulation. When students had done collaboratively on academic Web-based writing projects specifically, via Google Docs in the teaching learning process of writing, they understood and expressed their point of argument in producing their argumentative essay. Because Google Docs provided them the opportunity to get evidences on the spot for the issues which they didn't know before through accessing the internet, search engine or other related options. As a result, they easily supported their point of argument with reasonable rationales; they identified claims and its elements which are related with the given writing issue; they developed strong conclusion through making proper evaluation on the credibility of claims and quality of arguments. Then, they produced the essay through consciously monitoring their writing errors, and taking their friends and teacher feedbacks in to account, when necessary, because Google Docs allow them to work collaboratively on the given writing task anywhere and at any time.

The third major finding disclosed that the students increased their motivation towards writing including: self-efficacy, goal orientation, beliefs, and affect towards writing all showed measurable increases. Specifically, the most pronounced improvement was observed in students' self-efficacy and goal orientation, highlighting the tool's potential to foster confidence and purpose in writing. The intricate nature of writing and other related factors made students to perceive writing, and writing learning process difficult and boring. However, academic Web-based projects had changed the situation and promote students' writing motivation since it

facilitated the process of learning writing in team with unlimited exposure like any other non-academic entertaining tasks via their smart phone or personal computer or desk top computer easily with internet connection. In other terms, academic Web-based projects specifically, via Google Docs found a valuable method for increasing students' writing motivation since it made writing more fun and engaging, helped students to feel more supported, and helped students to see the value of their writing.

Overall, the findings of the study revealed that academic Web-based projects via Google Docs had positively influenced EFL students' academic writing performance, critical thinking skills, and their motivation towards writing. The method had improved students' academic writing performance and critical thinking skills, and increased students' motivation due to Google Docs facilitated the process of collaboration, gave them the opportunity to create different style of writing through providing new source of data like the internet, search engines, blogs and texting, as well as solved problems that occur in using the face-to-face collaboration in line with time, and feedback giving and receiving. As a result, academic Web-based projects via Google Docs easily enabled students to discover writing topics, produce ideas, collect and evaluate information, write drafts with evidence, share, or discuss with their teammates and teacher, and compose meaningful essays. Therefore, academic Web-based projects via Google Docs is suggested as a means to improve students' academic writing performance and critical thinking skills and to enhance students' motivation through taking the necessary conditions in using it in to account, because the method emphasized on collaboration, task-oriented learning and logical arguments. It is also advised for EFL teachers to use it besides the conventional way in the teaching learning process of writing when situations allow since it encouraged students to be autonomous, active, creative, collaborative and responsible learners through engaging on similar academic Web-based writing tasks without place and time boundary.

### **5.3. Recommendations**

Based on the findings of the study, the following suggestions are forwarded. Moreover, the suggestions here are generally based on test, questionnaire, textual analysis, focus group discussion, students' diary analysis and the review of literature. It is important to inform that the recommendations described below are meant to be informative rather than authoritative.

The findings showed that Web-based academic projects specifically, via Google Docs had developed students' academic writing performance and critical thinking skills, and increased students' motivation towards writing. Therefore, it is recommended that EFL writing teachers

should use Web-based collaborative instruction projects specifically, via Google Docs to develop students' academic writing performance and critical thinking skills and increase students' motivation through helping them to experience how to properly work on Web-based tasks by providing the necessary and efficient training on it, and taking the needed conditions in applying it in to consideration.

EFL teacher should ensure that all their students are technically rich, and highly adapt working with Web-based projects before using AWP as instructional method in the teaching learning process since students in the current study showed a significant improvement on their WP and CTs after experiencing the method through time.

Learning through using AWP cannot be preferred by all students. Therefore, EFL teachers should first assess their students' learning needs, preferences and styles in employing AWP in the teaching learning process in order to make decision as to how and when they use it due to there were few students who didn't prefer AWP at the beginning of the intervention in this study. Unless, it is impossible to bring a dramatic change in all students' WP, CTs and WM depending only AWP.

Not all writing tasks are well-suited for collaborative writing using web-based learning. Therefore, EFL teachers should technically choose and prepare activities that are appropriate for collaborative writing using online learning in order to bring the desired change on students' writing performance, critical thinking skills, and learners' writing motivation through academic Web-based projects, via Google Docs.

Teaching writing through collaborative writing using Web-based projects was found important for students in improving their writing performance and critical thinking skills, as well as enhancing learners' motivation beyond the classroom with no place and time limit. Hence, curriculum developer should develop a flexible curriculum that is appropriate for Web-based learning in terms of collaborative writing instruction, activities, assessment techniques, and including others desired curricula aspects.

The findings revealed that collaborative writing using Web-based projects specifically, via Google Docs had positively influenced students' academic writing performance, critical thinking skills and students' motivation towards writing. But teaching writing through using

academic Web-based projects requires the necessary conditions like strong internet connection, appropriate device, as well as having efficient skills in using technological equipment's like Google Docs for learning purpose from both teachers' and students' side. Therefore, concerned government authorities and other concerned stakeholders like students' parents, NGOs' (both local and international), which work on students' education, should aggressively work on fulfilling these conditions and make the environment safe and conducive for online learning.

AWP via Google Docs is a very good option for students when they have not enough time to discuss, and work collaboratively in the given activities in the class. Particularly, EFL students should use it to mitigate this problem, and enhance their writing skills since it allows them to practice without a boundary in time and place, and enables them to provide and receive instant feedback on their work from their peers and teacher.

AWP via Google Docs is found mandatory for the teachers when they do not have sufficient time to make follow up and provide immediate feedback on students work in class-learning. Hence, EFL and Other subject teacher should employ AWP via Google Docs when they face time shortage to assess their students' performance and provide timely feedback accordingly for contents and, or tasks appropriate to collaborative learning in class-room learning.

The findings of this study were clear indicator about the significance role of Web-based learning in upgrading the education system one step ahead. Therefore, concerned government authorities, educational experts and the ICT community should work collaboratively in developing Web-based learning besides the conventional learning system to bring the expected change not only on learners' academic writing performance, critical thinking skills, and their motivation towards writing but also to bring success in students' overall achievement in different subject areas, their personality as well.

Finally, the present study had only focused on writing skills, excluding other language skills. In addition, it was conducted without making device specification, and with only using Google Docs among other collaborative online writing applications. Therefore, future studies should also be conducted on the use of academic Web-based projects employing other academic web-based applications, through making device specification, and investigating its effects on the other language skills.

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## Appendix – A: Pre-test – 1

Time Allowed: 40 Minutes

ID. No \_\_\_\_\_

Gender: \_\_\_\_\_

### INSTRUCTION

Some people think that “Having sexual friendship is not fair for students at university level”. To what extent do you agree or disagree? Write an argumentative essay using over 250 words arguing for or against this idea. Write your essay on the attached sheet of paper.

NB: Your essay needs to have an introduction, body and conclusion.

There are university students who prioritize sexual friendship over academic achievement. Some people believe that such students are not successful in their education and future life. As a result, they believe that “Having sexual friendship is not fair for students at university level” What is your reaction towards this view? How? / What are your justifications? Write a five-paragraph essay of 250 or more words.

## Appendix – B: Pre-test – 2

Time Allowed: 40 Minutes

ID. No \_\_\_\_\_

Gender: \_\_\_\_\_

### INSTRUCTION

There are some communities who believe that “Female’s genital circumcision should be constitutionally supported and executed to produce well-disciplined generation”. What do you think about this issue? Write an argumentative essay using over 250 words arguing for or against this view.

NB: Your essay needs to have an introduction, body and conclusion.

There are Ethiopian parents who force their female children to go through genital circumcision. They believe that implementing this practice protects them from engaging in overly active behaviors which are considered unacceptable by the society, such as breaking house hold equipment, mis-trusting their husbands before or after marriage and so on. As a result, some members of the community believe that “Female’s genital circumcision should be constitutionally supported and carried out in order to produce well-disciplined generation” What is your reaction towards this view? How? Provide adequate reasons or justifications for your stance. Write a five-paragraph essay of 250 or more words.

## Appendix – C: Pre-test – 3

Time Allowed: 40 Minutes

ID. No \_\_\_\_\_

Gender: \_\_\_\_\_

### INSTRUCTION

People believe that “Facebook is the best social media”. To what extent do you agree or disagree? What is your reaction towards this view? How? Provide adequate reasons or justifications for your stance. Write a five-paragraph argumentative essay with 250 or more words arguing for or against this notion. Write your essay on the attached sheet of paper.

**NB:** Your essay needs to have an introduction, body and conclusion.

## Appendix – D: Post-test – 1

Time Allowed: 40 Minutes

ID. No \_\_\_\_\_

Gender: \_\_\_\_\_

### INSTRUCTION

Some people believe that “Universities should control their students’ way of life”. To what extent do you agree or disagree? Write argumentative essay using 250 words arguing for or against this idea.

NB: Your essay needs to have an introduction, body and conclusion.

There are university students who pass most of their time at cities, entertainment, chewing chat, smoking cigarette, drinking alcohol, joking with friends. As a result, they believe that “Universities should control their students’ way of life” What is your reaction towards this view? How? / Provide adequate reasons or justifications for your stance. Write a five-paragraph essay of 250 or more words.

## Appendix – E: Post-test – 2

Time Allowed: 40 Minutes

ID. No \_\_\_\_\_

Gender: \_\_\_\_\_

### INSTRUCTION

People argue that “Females’ affirmative action should stop”. What is your reaction towards this view? How? Provide adequate reasons or justifications for your stand. Write a five-paragraph argumentative essay with 250 or more words arguing for or against this view. Write your essay on the attached sheet of paper.

**NB:** Your essay needs to have an introduction, body and conclusion.

## Appendix – F: Post-test – 3

Time Allowed: 40 Minutes

ID. No \_\_\_\_\_

Gender: \_\_\_\_\_

### INSTRUCTION

Some people think that “Having sexual friendship is not fair for students at university level”. To what extent do you agree or disagree? Write an argumentative essay using over 250 words arguing for or against this idea. Write your essay on the attached sheet of paper.

NB: Your essay needs to have an introduction, body and conclusion.

There are university students who prioritize sexual friendship over academic achievement. Some people believe that such students are not successful in their education and future life. As a result, they believe that “Having sexual friendship is not fair for students at university level” What is your reaction towards this view? How? / What are your justifications? Write a five-paragraph essay of 250 or more words.

## Appendix – G: Students’ Questionnaire

Dear Students,

The purpose of this questionnaire is to obtain relevant information about your motivation towards argumentative essay writing and how much or how often you use them in learning and other real-life situations. Thus, you are kindly requested to give your responses honestly. Your responses will be used only for this research purpose.

Thank you in advance for your cooperation.

### 1. BACKGROUND INFORMATION

Gender: Male:..... Female:.....

Age :.....

Instruction: Read the following items, put a tick (√) mark on your level of agreement.

SA=Strongly Agree; 5 A=Agree; 4 U=Undecided; 3 DA= Disagree;2

Strongly Disagree; 1

NO	Items	Level of Measurement				
		SA	A	U	DA	SD
I	Self-efficacy for writing					
1.	I am able to write a clear instruction					
2.	I am able to write essay with proper details to support the topic sentences					
3.	I am able to write essay with strong conclusion.					
4.	I can edit my writing to correct my error.					
5.	I am able to produce ideas to write.					
6.	I can write grammatically correct sentences in my writing work.					
7.	I can organize ideas to write.					
8.	I can use a wide range of vocabulary in my composition.					
9.	I can revise my paper to make it paper better.					
10	I can discover a writing topic.					
II	Goal Orientation for Writing	SA	A	U	DA	SD
11.	When I write, I try to enhance how I express my ideas.					
12.	When I write, I try to become better write.					
13.	When I write, I try to better organize my ideas.					
14.	When I write, I try to persuade others with my writing.					
15.	When I write, I try to avoid making mistakes.					
III	Belief About Writing					
16.	Writing helps make my ideas clearer.					
17.	Good writers discover new ideas while writing.					

18.	Good writers need to revise their paper.					
19.	Good writer has to able to use a variety of sentence structure.					
20.	Writing is one of the best ways to explore new ideas.					
IV	Affect about Writing					
21.	Writing is one of my favorite activities.					
22.	The process of writing is satisfying for me.					
23.	I think that writing is interesting.					
24.	I look forward to writing classes.					

## Appendix – H: Students’ Focus Group Discussion Items

1. Do you think that collaborative writing using academic Web-based projects specifically, via Google Docs increases your motivation towards writing such as your willingness and preference? If so, how?
2. Do you think that collaborative writing using academic Web-based projects specifically, via Google Docs in writing classes enhances your argumentative essay writing performance in line with task achievement, coherence and cohesion, lexical resource, and grammatical range and accuracy? If so, how?
3. Do you think that collaborative writing using academic Web-based projects specifically, via Google Docs in writing classes empowers your critical thinking skills which include (interpretation, analysis, evaluation, inference, description, and self-regulation)? If so, how?
4. If you have developed your critical thinking skills while you used collaborative writing using academic Web-based projects specifically, via Google Docs in writing classes, do you think that critical thinking skills are helpful to your real-life situations?
5. What are the benefits and limitations of collaborative writing using academic Web-based projects specifically, via Google Docs in argumentative writing class?
6. What are the challenges of collaborative writing using academic Web-based projects specifically, via Google Docs in argumentative writing class?
7. Do you have any idea that you want to add about collaborative writing using academic Web-based projects specifically, via Google? If so, please express your idea.

## Appendix – I: Students’ Diary Analysis

Dear students

The purpose of this students’ diary analysis is to collect data about your writing performance, critical thinking skills and your motivation towards writing. Therefore, taking the purpose in to consideration provide your answer in the space provided in front of each question.

1. How do you evaluate the effectiveness of your conventional way of learning writing collaboratively in comparison with learning writing collaboratively using online Web-based projects specifically, via Google Docs? Please, explain.
2. How do express your motivation towards learning writing skill collaboratively using academic Web-based projects specifically, via Google Docs in comparison with learning writing collaboratively face-to face in class-room?
3. What is your feeling about your performance to do an intended writing task properly using the intervention?
4. How do express the effectiveness of the teaching material and collaboratively using academic Web-based projects specifically, via Google Docs?
5. How do you explain the advantages of working on academic Web-based collaborative writing tasks/projects using Google Docs in terms improving your writing skills including: (task achievement, coherence and cohesion, lexical resources, and grammatical range & accuracy?)
6. How do you explain the advantages of working on academic Web-based collaborative writing tasks/projects using Google Docs in terms developing your critical thinking skills including: (interpretation, analysis, evaluation, inference, description and self-regulation)?
7. What were the major problems that you face in learning writing collaboratively using academic Web-based projects/ tasks specifically, via Google Docs?
8. What do you suggest to mitigate the problems and about collaborative writing using Web-based projects/tasks specifically, via Google Doc

## Appendix – J: TEACHING MATERIAL

# ARGUMENTATIVE ESSAY WRITING



## **INTRODUCTION**

This teaching material is prepared for the students who enrolled in advanced writing skill course. It aims to enable students generate topics and produce their own effective argumentative text. In order to achieve these goals; the teaching material is developed through including two major sections. The first section highlights general overview about essay writing. The second section focuses on argumentative essay writing. Thus, it is mandatory for learner to help them understand argumentative essay in detail standing from general concept of an essay.

## **TEACHING METHOD AND ACTIVITIES**

In the teaching learning process, collaborative writing method is largely used among other active learning and teaching methods. Besides, students are expected to do the given collaborative writing activities alone. Then, they contribute to the group when they work together with their group members online. In doing so, the instructor provides them brain storming activities at the beginning of each session. In addition, lecture is used to familiarize new concepts for students when they ask the instructor to do so. In the whole writing process, students are encouraged to actively participate in the given collaborative writing activities which are delivered using Web-based teaching via (Google Docs). Moreover, the instructor uploads/shares important documents online to promote the learners' understanding and virtually facilitate the teaching learning process through making students to present their work for their classmates since it allows them to get feedback from their friends and their instructor as well.

## **STUDENTS' ACTIVITIES**

In the whole teaching learning process students take the lion role through participating actively in the given activities like: familiarizing themselves about every aspect of argumentative essay which help them to generate topics and to produce their own argumentative texts. In doing so, learners first participate in the brain storming activities and post- writing activities by drafting or outlining their own response alone. Next, they should contribute to the group when they work together online. Then, they participate in the assessment process by assessing their work and their friends work for feedback. Finally, they should reflect their work virtually to other groups and their instructor for feedback and comment during the virtual sessions.

## **INSTRUCTOR'S ACTIVITIES**

Since collaborative writing method is largely used in the teaching learning process, the instructor role is as a facilitator. Therefore, the instructor provides support and lecture to students only when they ask him/her to do so. But the teacher interference is a must while the process of writing to make follow up and at the end of each session for sake of clarification through giving feedback and comment on students' writing work.

## **ASSESSMENT**

The assessment will be conducted by students. Accordingly, self-assessment, peer assessment and group assessment will be used. Teacher assessment will also be employed, when necessary, in each phase of the teaching learning process.

## **RESOURCES**

Computer/ Smart phone, Internet access, stationary materials like: paper and pen

## **SECTION ONE: GENERAL OVERVIEW ABOUT ESSAY WRITING**

Learning outcomes

After the end of this section students will be able to:

- Define the meaning of essay.
- Identify the structure of an essay.
- Describe/ explain effective essay writing techniques.
- Analyze written essays
- Develop/ produce their own essay.

Students, now you are going to learn about essay writing, in your essay writing lesson, you need to assess your learning by asking the four “KWHL” questions/ chart. It implies you to ask yourself questions including ‘what do I Know’, what do I Want to know, ‘How do I found out’, and ‘what I have Learned’.

Answer the following brain storming questions first by drafting your responses alone. Then, discuss and work together with your group mates using the online writing plat form (Google Docs).

### **ACTIVITY 1.1.**

1. Discuss and explain the meaning of essay.
2. Discuss and describe structure of an essay.
3. What do you think about effective essay writing techniques?

Compare your answers with points stated in the guiding teaching material about the meaning of an essay, structure of an essay and effective essay writing techniques.

The following explanation help you to have clear understanding about meaning of essay, structure of an essay and effective essay writing techniques. You can compare with your responses that you have discussed in group previously.

### 1.1. Meaning of an Essay

Essay is basic structure in English language writing, and it is formed from a group of related paragraphs.

### 1.2. Structure of an Essay

In writing an essay, basically there are three kinds of structures that serve to build it. These are: thesis statement, supporting paragraphs and concluding paragraph. The thesis statement reflects the main idea of the essay, and it appears in the introductory paragraph. The supporting paragraphs are presented following the introductory paragraph in order to provide specific evidences about the thesis statement. Finally, a short concluding paragraph that is presented next to the supporting paragraphs closes the essay.

Students, the following information in the chart will guide you how an essay is written including its basic structures. In addition, it helps you to analyze a written essay. Therefore, you can easily do activity 1.2.

<p><b>Introductory Paragraph</b></p> <ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ Thesis statement</li> <li>▪ Plan of development</li> <li>▪ Points 1, 2, 3, etc</li> </ul>	<ul style="list-style-type: none"> <li>➤ The introduction attracts reader' interest.</li> <li>➤ The thesis statement states the main idea of the essay/ the text.</li> <li>➤ The plan of development is a list of points that support the thesis.</li> <li>➤ The points are presented in the order in which they will be developed in the paper</li> </ul>
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<p><b>First Supporting Paragraph</b></p> <ul style="list-style-type: none"> <li>▪ Topic sentence (point 1)</li> <li>▪ Specific evidence</li> </ul>	<ul style="list-style-type: none"> <li>➤ The topic sentence advances the first supporting point for the thesis.</li> <li>➤ The specific evidence in the rest of the paragraph develops the first point</li> </ul>
<p><b>Second Supporting Paragraph</b></p> <ul style="list-style-type: none"> <li>▪ Topic sentence (point 2)</li> <li>▪ Specific evidence</li> </ul>	<ul style="list-style-type: none"> <li>➤ The topic sentence advances the second supporting point for the thesis.</li> <li>➤ The specific evidence in the rest of the paragraph develops the second point.</li> </ul>
<p><b>Third Supporting Paragraph</b></p> <ul style="list-style-type: none"> <li>▪ Topic sentence (point 3)</li> <li>▪ Specific evidence</li> </ul>	<ul style="list-style-type: none"> <li>➤ The topic sentence advances the third supporting point for the thesis.</li> <li>➤ The specific evidence in the rest of the paragraph develops the third point.</li> </ul>
<p><b>Concluding Paragraph</b></p> <ul style="list-style-type: none"> <li>▪ Summary</li> <li>▪ Conclusion</li> </ul>	<ul style="list-style-type: none"> <li>➤ A summary is a brief restatement of the thesis.</li> <li>➤ A conclusion is the final thought of the subject that concludes the paper.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Both Summary and Conclusion</li> </ul>	

## ACTIVITY 1.2

**Read the following essay carefully; answer the questions which are presented below the essay by discussing with your group friends.**

**NB: Use the online writing platform (Google Docs) to express your idea.**

### **Ten Work Culture: Opportunities and Challenges in Balancing Work and Education**

Roxanne Bradshaw, educator and officer of the National Education Association stated, the pressure for teenagers to find employment is significant, influenced not only by the current economic challenges but also by pressure to gain sense of freedom and independency, as well as to have their own spending money. Our main concern arises when part-time jobs start to take precedence over other important aspects. In relation to this, many people believe that working can provide valuable experiences for young people. However, working more than fifteen hours a week can be detrimental to adolescents as it diminishes their engagement with school, promote a materialistic and costly lifestyle, and heighten the risk of encountering issues with drug and alcohol.

When adolescents work long hours, their participation in schoolwork and extracurricular activities decrease. Teachers have experienced increasing challenges as more teenagers have taken advantage of the various part-time jobs available at fast-food restaurants and malls. They must hold exhausted teens' attention while still assigning homework to students who do not have time to complete it. Furthermore, educators have observed a reduction in participation in extracurricular activities, which many believe have a positive impact on young people. School bands and athletic teams are losing players due to jobs, and working students attend fewer sporting events. Teens who strive to balance academics, extracurricular activities, and work may become weary and prone to disease. A recent newspaper report, for example, detailed a girl in Pennsylvania who contracted mononucleosis as a result of pursuing outstanding grades, participating in two school athletic teams, and working thirty hours per week.

Another disadvantage of excessive employment is that it might foster materialism and an unrealistic lifestyle. Some parents argue that working teaches adolescents the value of a dollar. That is certainly possible. It is also true that some teenagers labor to supplement their

family's income or save for college. However, polls have revealed that the majority of working youths spend their earnings on luxury such as computers, video game systems, apparel, and even cars. These young individuals, some of whom earn \$400 or more per month, aren't concerned about spending properly; they can very much have it all. According to experts, in many cases, kids are developing accustomed to a lifestyle that they will be unable to support several years later, when they will no longer have parents paying for auto insurance, food, and accommodation. At that point, they will struggle to afford both essentials and luxuries.

Finally, youths who work a lot are more prone than others to experiment with alcohol and drugs. Teens who work long hours desire a rapid escape from stress, much as adults require a couple of martinis after a long day at work. Stress is most likely at an all-time high in our society today. Furthermore, wealthy teenagers are more prone to experiment with narcotics.

Teenagers can get the benefits of labor while avoiding the negatives by restricting their working hours throughout the school year. As is often the case, taking a modest approach will be both healthy and encouraging.

**Here are the questions that you are supposed to answer**

1. Does the introduction of the essay attract your interest as a reader? How?

.....

2. Write the thesis statement of the essay.

.....

3. Are the points in the introduction presented in the order in which they developed in supporting paragraphs? How?

.....

4. Write the topic sentence of the second paragraph.

.....

5. How does the specific evidence of the second paragraph support its main idea?

.....

6. Write the topic sentence of the third paragraph.

.....

7. How does the specific evidence of the third paragraph support its main idea?

.....

8. Write the topic sentence of the fourth paragraph.

.....

9. How does the specific evidence of the fourth paragraph support its main idea?

.....

10. Does the conclusion restate the thesis statement of the essay? How?

.....

### **1.3. Effective Essay Writing Techniques**

Being critical in writing essay helps to develop an effective text because it allows the writer to see the topic sentence multi dimensionally. In doing this, asking yourself “WH” questions is very mandatory in each phase of the writing process. For instance: while writing the introduction of section the essay, asking questions like what, who, where and when help you to interpret the theme of your text. In developing the body of an essay, asking questions like how, why and what if leads to state the situation in detail. At the closing section of the essay, asking questions like what is next and so what help to develop an effective essay closing remark through evaluating the issue and forwarding appropriate recommendation respectively.

From the above explanation we can infer that asking and answering questions helps to perform interrelated basic tasks of description, analysis and evaluation. These are reliable basis for introducing, discussing and drawing conclusions about your topic. In developing effective essay, you might not expect to address all questions, but necessarily addressing questions like

what, why, how and so what for any topic and sub-topic has great role in your writing. Because, through asking the what question can identify the issue, through asking the why question can explore the issue in detail by investigating the cause and supporting it with related theories, through asking the how question can observe the process at work, and finally through asking ‘so what’ can reach to the conclusion and can make appropriate judgment about it.

The other scholarly advised technique in producing effective essay is using WPS/ Writing Process Sheets.

Writing process sheet in essay writing is defined as step-by-step techniques that guide the writer to discover, choose and clarify a topic; discover supportive information, discover arrangements; discover stylistic choice, and promote unity, specificity, and coherence. In using the writing process sheet to develop an essay, students should ask and answer different questions in each step of the writing process. Hence, the following points guide you how you develop an effective essay by using writing process sheet.

### **WPS 1: Discovering, Choosing and Clarifying a Writing Topic**

#### **❖ Discovering a Writing Topic**

The following questions will guide to discover appropriate topics if you are not given a writing topic:

1. What is the content for my topic research?
2. What is my tentative purpose?
3. Who is my initial audience?
4. What do I have in my head right now worth writing about?

What technique does offer any clues?

Free writing? Free association? My journal writing?

5. What information do others have in their heads worth writing about?

What technique/s will tap others’ ideas?

Conversations? Question-answer session? Group discussion?

6. What subject areas offer possible ideas?

Personal experience? Commonly held beliefs? Prejudices? Public figures?

### ❖ **Choosing a Writing Topic**

When you are given list of writing topics or when you need to choose your best topic after generating lots of writing topics the following questions will provide you direction on how to prefer/ choose appropriate topic.

1. What interests me in general? What do I get excited about?
2. What is generally important to me?
3. What concerns me physically, emotionally, intellectually?
4. What topic would be interesting to my audience?
5. What topics best complements my purpose?
6. Which topic receives the highest ranking over all in terms of self, audience, and purpose?

### ❖ **Clarifying a Writing Topic**

Clarifying a writing topic is the task that should be implemented after discovering and choosing writing topic. In doing so, the following are important questions that help students to clarify the given writing questions:

1. What is the primary question this topic raises?
2. What are the sub-issues that need consideration?
3. What are some issues that topic does not address?
4. How my topic is broad or narrow in terms of purpose and audience?
5. How long will the paper on this topic be?

## **WPS 2: Discovering Supportive Information**

Discovering supportive information is a task which is implemented after having clarified topic for the writing. But here the main questions are where and how you get/ discover supportive

information. So you can gather data from both primary and secondary sources which can be personal, social and library sources through conducting interview, surveys and note taking. However, it is a must to evaluate the sources before you incorporate them into your writing. In addition, you need to be careful about plagiarism when taking others' work in your writing. Accordingly, the following writing process sheet will guide you important techniques that help you to discover personal sources, social sources, library sources, and how to take note and conduct interviews.

❖ **Location Information**

1. What information can I find about my topic through personal sources?
2. What do I know about my topic?
3. What contributions can my friends make?
4. What information can I gain from social sources?
5. What information can an interview or survey provide?
6. What information does the library have on my topic?
7. What should I remember about note-taking and plagiarism before I start taking notes?

❖ **Preparing an Interview**

**Topic:**.....  
**Audience:**.....  
**Purpose:**.....  
**Interviewee:**.....  
**Relationship to the topic:**.....  
**Time:**.....  
**Place:**.....  
**Method:**.....

1. What type of questions am I going to ask?

Yes/No, Multiple choice, Direct, Open-ended, Hypothetical

2. What are the questions?

3. How am i going to order them?

4. Do I categorize the questions thematically?

5. Where is my concluding idea of the intervention?

6. What kind of relationship should I have with the interviewee?

7. How am I going to establish interviewee rapport?

8. How am I going to respond to his/her answer?

#### ❖ **Note Taking**

You have to consider the following points while note taking process, and need to critically evaluate the source in line with your purpose.

1. Is this information accurate?

2. Is the information biased?

3. Is the information authentic?

4. Is the information current?

5. Is the information helpful?

6. What is the source's main idea? Purpose? Audience?

7. What type of evidences does the source offer?

8. What is crucial to the understanding of the topic?

9. How can the sources themselves be grouped?

10. Does the source material suggest something to change my controlling idea?

### **WPS 3: Discovering Arrangements**

Arrangement refers to adjusting ideas in order in your writing. In line with this, you as a writer should be expected to decide which one should come first, next and then to keep the flow of your writing. In doing so, before arranging ideas you should refine the data in your hand. The following process sheet will guide you how you refine the collected information and arrange the evaluated information.

Once you collected data, you should think about the information you gathered, evaluate its relevance, and select the relevant information to be incorporated into your paper. Considering the following point is helpful in order to refine/ evaluate the information you collected.

#### **❖ Evaluating Information**

1. Does the information fit my topic?
2. Does the collected information fit my purpose?
3. Does the collected information fit my audience?
4. Do I have information for introduction?
5. Does the collected information have adequate details?
6. Do I have information for conclusion?

#### **❖ Drafting for Arrangements**

1. Are there any clues in my reading that suggest arrangements?
2. Are there any clues in the composing content that suggest arrangements?
3. Does the basis for my subject-splitting suggest arrangements?
4. Does how I join ideas in to synthesis suggest arrangements?
5. Does the wording of my primary and secondary question/s suggest arrangements?
6. Does the relationship between the parts of my material suggest for arrangements?
7. Does the sectioning of my material in my preliminary draft suggest arrangements?

**NB:** After arranging the information you gathered and refined, the next task that you are expected to do is writing the draft of your writing using your own word based on your exploration. In doing so, you should organize the information you gathered and produce your essay considering your audiences through interpreting and analyzing ideas, providing evidences, communicating ideas and justifying conclusions. Besides, you can systematically write your draft by evaluating, selecting, combining and synthesizing your collected data. In addition, you may compare, contrast, organize and sort, make connection of ideas, and draw inferences from your findings.

#### **WPS 4: Discovering Stylistic Choice**

Discovering stylistic choice refers to different aspects of your writing in regard with adjusting your level of usage to match your audience, subject, and purpose. It is also a line with identifying between denotations and connotations in word choice, and considering emphasis in phrasing. In addition, It is related with increasing your vocabulary, and reducing passive and wordy constructions. Therefore, in discovering stylistic choice, you should think over how you use your introduction and conclusion together to frame your message, orient your reader, and establish the significance of your paper. Hence, the next writing process sheet will guide you on how write your introduction and conclusion.

##### **❖ Developing Introduction**

1. Which of the following interest-catching devices seems appropriate to my subject, purpose, and audience?
  - Questions, Quotations, Striking details or description, Statistics, Analogy, Narrative or anecdote, startling or unusual facts, A representative example
2. What raw material do I have for my interest-catching device?
3. What material can I generate for my interest-catching device?
4. How can I think my interest-catcher and controlling generalization together?
5. Will my introduction orient my reader to my subject? Purpose?
6. Will provide necessary information to my readers' understanding of my subjects?

### ❖ **Developing Conclusion**

1. What is the significant point of the paper that should be included in the conclusion?
2. Will my conclusion explicitly or implicitly contain my controlling generalization?
3. What raw material do I have for my conclusion?
4. What material can I generate for my conclusion?
5. Could any of the following devices be an appropriate close for my paper?

Summary questions      Personal Application      Statistics      Quotation  
General Application      Specific detail      Analogy      Speculation

6. Will my conclusion provide a sense of closure for my reader?
7. Will it prompt the reader to think about my ideas beyond the context of the paper itself?

### **WPS 5: Using Style to Promote Unity, Specificity, and Coherence**

It is a must revising and editing your essay when you develop your writing draft in order to make your writing clear, concise, consistent, and appropriate for the audience. Basically, through revising your draft you can check its unity, coherence and completeness. In addition, it can help you to edit your paper for mechanical errors. The following writing process sheet will guide you in revising your writing draft.

### ❖ **Promoting Unity, Specificity, and Coherence**

1. What is the main idea of the paper? Its purpose? Its audience?
2. Does my reader have specific expectations concerning my frame?
3. What points of view (person) is appropriate to my subject? Purpose? Audience?
4. Would presenting multiple points of view be appropriate and effective? If so, what would be the best method of their presentation?
5. How can I promote specificity through concrete language, dialogue, lists, tables, or graphs?
6. How can I use sentence combining to reduce vague references, switches in emphasis

and unnecessary repetition?

7. How I can I promote coherence through meaningful cohesive devices?

Here, the other main thing in the revision process is, knowing with whom you are working to get feedback. Peers, the teacher and experts are principal participants in feedback giving and receiving process. Therefore, you can receive feedback about the strength and weakness of your written work from them. Then finally, you can develop your complete essay using the necessary feedbacks and making proofreading on your essay.

### ACTIVITY 1.3.

1. **Write an essay of five paragraphs having 250-300 words on issue which is interesting to you, and reflect it both in written and orally for your classmates what you work in group using Google Docs.**

**NB: Using “KWHI” chart and Writing Process Sheets would be helpful to guide you on the whole process of your essay writing journey.**

#### KWHL Chart

<b>What do I Know?</b>	<b>What do I Want to know?</b>	<b>How do I find out information?</b>	<b>What have I Learned?</b>

## SECTION TWO: WRITING AN ARGUMENTATIVE ESSAY

### Learning Objectives

**After the end of this section students will be able to:**

Clearly conceptualize different aspects of argumentative essay like its meaning, features etc

Analyze written argumentative essay

Produce argumentative essay

Students, now you are going to learn particularly about writing an argumentative essay. Before going to see it in detail, it is better to examine your existing performance through answering the following probing questions which are presented to familiarize you about different aspects of argumentative essay.

### ACTIVITY 2.1.

- 1. What is argumentative essay?**
- 2. What makes argumentative unique from other essay types?**
- 3. How did you organize opposing ideas in your argumentative essay writing?**

**NB: Discuss/ work together in your group and use the online writing platform (Google Docs) to express your idea in written.**

### 2.1. Meaning of Argumentative Essay

Argumentative essay is defined as a type of essay in which the writer tries to write by supporting a controversial issue or defending a position in which there is a difference of opinion. An argumentative essay takes a firm stand on an issue and then attempts to convince readers to agree with the stand. Writer in writing argumentative essay uses logic and reason to show that one idea is more legitimate than another idea. The argument must always use sound

reasoning and solid evidence by stating facts, giving logical reasons, using examples, and quoting experts.

## **2.2. Feature of Argumentative Essay**

What makes different argumentative essay is, you do not just give reasons to support only your point of view, but you must also discuss the other side's reasons and then rebut them. Rebut in argumentative essay means to point out problems with other side's reasons to prove that they are not good reasons. This is because the writer wants readers to know that he/she has considered all sides of the issue. When the writer shows this, he/she is reasonable and open-minded: readers are more likely to read and be convinced.

## **2.3. Organizing Argumentative Essays**

Argumentative essays can be organized in several ways. The most common organizing methods are the block pattern and the point-by-point pattern. The following table provides you helpful information on how you organize argumentative essays using these two methods.

<b>Block Pattern</b>	<b>Point-by-Point Pattern</b>
<p><b>I. Introduction (Explanation of the issue)</b></p> <p style="text-align: center;"><b>Thesis statement</b></p> <p><b>II. Body</b></p> <p style="text-align: center;"><b>Block 1</b></p> <p><b>A.</b> Summary of other side's arguments</p> <p><b>B.</b> Rebuttal to the first argument</p> <p><b>C.</b> Rebuttal to the second argument</p> <p><b>D.</b> Rebuttal to the third argument</p> <p style="text-align: center;"><b>Block 2</b></p> <p><b>E.</b> Your first argument</p> <p><b>F.</b> Your second argument</p> <p><b>G.</b> Your third argument</p> <p><b>III. Conclusion (Include a summary of your point of view)</b></p>	<p><b>I. Introduction (Explanation of the issue, including a summary of the other side's view)</b></p> <p style="text-align: center;"><b>Thesis statement</b></p> <p><b>II. Body</b></p> <p><b>A.</b> Statement of the other side's first argument and rebuttal with your own counterargument.</p> <p><b>B.</b> Statement of the other side's second argument and rebuttal with your own counterargument.</p> <p><b>C.</b> Statement of the other side's third argument and rebuttal with your own counterargument.</p> <p><b>III. Conclusion (Include a summary of your point of view)</b></p>

The above table also helps you to identify the key points in writing argumentative essay.

These are:

1. Explanation of the issue
2. Clear thesis statement
3. Summary of the opposing arguments
4. Rebuttals to the opposing arguments, and
5. Your own arguments

### **ACTIVITY 2.2.**

**Read the following argumentative essay on “Benefit of Gender Segregation During Adolescence: A focus on Developmental Challenges” and answer the questions given below.**

1. In which paragraph does the writer give background information to help readers understand the issue?
2. Does the thesis statement mention both sides of the issue, or does it give the writer's point of view only?
3. How many opposing arguments are given? Where are they given?
4. Where does the writer rebut the opposing arguments: in one paragraph or separate paragraphs?
5. What is the function of the last paragraph?
6. Which type of organization does this essay use: Block or Point-by-Point?

## **Benefit of Gender Segregation During Adolescence: A focus on Developmental Challenges**

The seventh and eighth grades of middle school are often regarded as particularly challenging. During these years, the difference in physical, emotional, and cognitive development of boys and girls become quite apparent, with girls typically progressing more quickly. Both gender face difficulties during this time. Educators are debating/arguing whether separating boys and girls these challenging years could enhance students' academic performance. Currently, public schools that receive federal funding are not allowed to separate classes by gender. However, a proposed change in federal law is being considered to allow this practice. While some parents and educators oppose single-sex classes, there is some evidence suggesting that separating boys and girls in middle school can lead to positive learning outcomes.

Opponents of single-sex education argue that test scores for pupils in all girl or all boys test results are no greater than those in mixed classes. However, the research is inclusive. Despite the fact that some studies indicate no gain in test scores, others provide exactly the opposite outcome. More importantly, many psychologists believe that exam scores are inaccurate measuring sticks. They believe that self-confidence and self-esteem concerns are more essential than exam results. For example, girls in same-sex classes express enhanced confidence and positive attitudes toward math and science. These are effects that cannot be measured by a test but will help adolescents become successful adults long after their stressful middle school years are over. According to New York University Professor Carol Gilligan, girls are more likely to be "creative thinkers and risk takers as adults if educated apart from boys in middle school." Boys acquire confidence when they are not competing with girls too. Boys at this age become upset and fight back in middle school because they believe they are inferior to girls, who literally "outthink" them. With no girls in the classroom, they are more comfortable with themselves and more open to learning.

Opponents also claim that having separate classes or schools sends a message that men and women cannot work together. They argue that when pupils enter the workforce, they will have to work alongside people of the opposite sex, and attending all-girl or all-boy schools will prevent them from learning how to do so. However, such an argument ignores the fact that youngsters frequently contact with individuals of the opposing sex outside of school. Children acquire and practice the skills they will need in their future professions every day, from playing and bickering with their siblings to negotiating allowances, duties, and

privileges with their opposite-sex parent.

The final arguments advanced by opponents of same sex education is that it is discriminatory and, therefore, unconstitutional. However, research supports exactly the opposite conclusion: that discrimination is widespread in mixed classes. Several studies have shown that boys dominate discussions and receive more attention than girls and that teachers call on boys more often than they call on girls, even when girls raise their hands. Clearly, this is discriminatory.

It should be evident that the arguments against same sex classes are not valid. On the contrary, many people involved in middle school education say that same sex classes provide a better learning environment. Boys and girls pay less attention to each other and more attention to their schoolwork. According to one teacher stated, "Girls are more relaxed and ask more questions; boys are less disruptive and more focused." Girls are less afraid of making mistakes and asking questions. Many middle school educators believe that same-sex classes provide a better learning environment because boys and girls pay less attention to each other and more attention to their studies. Finally, discrimination exists in mixed classes, hence discrimination is not an acceptable justification. As a result, in my opinion, the law forbidding same-sex classes in public schools should be amended.

**Here are the questions you need to answer by reading the above argumentative essay.**

**NB:** Use the information which is presented in 2.3. When you are doing, and then use the online writing platform (Google Docs) to present your response while you work with your group friends.

## Separating the Sexes, just for the Tough Years

### I. Introduction (Explanation of the issue)

Thesis statement: \_\_\_\_\_  
\_\_\_\_\_

### II. Body

#### A. Opposing argument, I

Opponents of single-sex education claim that test scores show that there is no advantage to all-girl or all-boy classes.

Rebuttal to argument I

1. Research is inconclusive-show opposite results

2. Other results that cannot be calculated

A. Girls \_\_\_\_\_

B. Boys \_\_\_\_\_

C. Opposing argument 2 \_\_\_\_\_

Rebuttal to argument 2 \_\_\_\_\_

A. Settling squabbles with siblings

B. Negotiating with opposite-sex parent

C. Opposing argument 3 \_\_\_\_\_

Rebuttal to argument 3 \_\_\_\_\_

A. \_\_\_\_\_

B. Teachers call on boys more often

C. Own point of view

1. Same-sex classes provide a better learning environment

2. Reasons

A. Boys and girls \_\_\_\_\_

B. Girls \_\_\_\_\_

C. Boys \_\_\_\_\_

### III. Conclusion

### **Activity 2.3.**

1. What kinds of logical fallacies do you know? Discuss in groups on the common errors of logical fallacies you know.
2. Read the above argumentative essay on “Benefit of Gender Segregation During Adolescence: A focus on Developmental Challenges”, and evaluate its way of argumentation if there are logical fallacies in it.

### **2.4. Logical Fallacies in Argumentative Essay**

It is obvious that the main purpose of a writer in argumentative essay could be to persuade readers his /her own view on the issue to help them take some part and action accordingly. In doing so, the writer is expected to write their argumentation supporting with clear core point and ample of strong rationales/ logical evidences. In contrast, if the writer uses insufficient rationales/ weak logics to convince their readers, he/she cannot get the desired credibility from them. In this sense, when the writer grounds an idea on a weak logic, it is called that the writer has committed a logic fallacy, which means common error of logic.

The main logical fallacies in argumentative essay includes: hasty generalizations, faulty cause and effect, reductive reasoning, false analogies, begging/avoiding question, circular reasoning, equivocation, ad hominen arguments, false either-or arguments, bandwagon-appeals and non-sequiturs.

The next points help you to understand these logical fallacies supporting with examples.

#### **1. Hasty Generalizations**

Hasty generalization logical fallacies occurred when writers used typical, irrelevant, or inaccurate evidence in their writing. Example: Our students are physically fit; just look at the success of our sports teams this year.

#### **2. Faulty Cause and Effect (Post Hoc)**

Post Hoc is the result of assuming that because B follows A, A must be the cause of B. Example: Tourism in this city started to decline right after Mayor Scott was elected. To save our tourist industry, let's replace her now!

### **3. Reductive Reasoning**

Reductive reasoning is to reduce a complex effect to a single cause. Example: People who want to be healthy should eat Mango. My Grandmother loved Mango, and she lived to be ninety-eight.

### **4. False Analogies**

False analogies occur when writers overlook the fact that two things being compared are more different than they are similar. Example: Why am I required to take certain courses before I can graduate from this university? No one requires me to buy certain groceries before I can leave a supermarket.

### **5. Begging (Avoiding) the Question**

It occurs when a writer assumes as true the very point he or she is arguing. Example: Improving public transportation in this city won't solve highway congestion. Even if public transportation is clean, safe, and efficient, people will still prefer to use their cars.

### **6. Circular Reasoning**

It occurs when the argument merely restates the conclusion it was meant to support. Example: The minister is such a good person because she is so virtuous.

### **7. Equivocation**

Equivocation involves using a term in a completely different way than one's opponent uses it. Example: My goodness, your honor! It is absurd that I am being prosecuted for stealing a copy of the Detroit Free Press. For one thing, we are guaranteed by the Constitution our right to a free press. And look at the name of this newspaper—does it not say Free Press?

### **8. Ad Hominem Arguments**

Ad hominem literally means "against the person." Thus, Ad hominem argument means to attack the opponent himself or herself rather than his or her argument. Example: Senator Jones' bill on gun control should not be taken seriously; after all, this is the same man who has had at least five extramarital affairs.

### **9. False either/or Arguments**

False either/or arguments assume that only two alternatives exist in a given situation.

Example: The case is clear: either we support the death penalty or we allow crime to run rampant.

**10. Bandwagon Appeals** Bandwagon appeal arguments suggest that readers should accept something because it is popular, and more people are becoming involved in. Example: A recent poll showed that seventy percent of the American public believes emissions requirements on automobiles have gone too far; therefore, these laws are unreasonable and should be repealed.

### **11. Non-Sequiturs**

Non sequitur literally means "it does not follow." Such fallacies occur when writers fail to show clear connections between their premise or starting point and conclusion. Example: Maria loved college, so I'm sure she will make an excellent teacher.

**N.B:** Watch for the above-mentioned logical fallacies in your own argumentative essay writing, and if you find them, do your best to get rid of them

### **Activity 2.4.**

1. Write an argumentative essay of five paragraphs having 250 - 300 words on your own argumentative essay writing topic. The following writing process sheets can guide you on how to write the essay?

NB: -Use Google Docs to write your essay.

### **WPS 2.1: Discovering Argumentative Essay Writing Topic**

1. What argumentative issue do I have in my head right now worth writing about?
2. What information do others have in their heads worth writing about?
3. What subject areas offer possible ideas?
4. What interests me in general? What do I get excited about?
5. What is generally important to me?
6. What is my purpose?

7. Who is my audience?

8. What is the content for my topic search?

Next to discovering your argumentative essay writing topic, you have to clarify the topic. The following questions can guide you to clarify the topic.

1. What is the primary issue this topic raises?
2. What are the sub issues that need consideration?
3. What are some issues the topic does not address?
4. How my topic is broad or narrow in terms of purpose and audience?
5. How long will the paper on this topic be?

### **WPS 2.2: Discovering Supportive Information**

Discovering supportive information helps to get information on your argumentative essay writing topic. Thus, you are expected to search for further information beyond what you currently know on your topic. Here are some probing questions which guide your information discovery.

1. What do I know about my argumentative essay writing topic?
2. What information can I gain from “social” sources?
3. What information can an interview or survey provide?
4. What information does the library have on my topic?
5. What should I remember about note-taking and plagiarism before I start taking notes?

Before you gather information through interview on your argumentative essay writing topic, look at the following questions before you conduct the interview.

1. What types of questions am I going to ask my interviewee?

Yes/No, Multiple Choice, Direct/ Indirect, Open-ended/Closed, Hypothetical

2. What are the questions?
3. How am I going to order the questions?
4. Do I categorize the questions thematically?

5. Where is my concluding idea/question for the interview session?
6. What kind of relationship should I have with the interviewee?
7. How am I going to establish interviewee rapport?
8. How am I going to respond to his/her answers?

Apart from this, you need to consult various library sources: hard and soft copies through notetaking. However, when you collect data from any source you have to critically evaluate the information. Consider the following questions in your evaluation.

1. Is this information accurate?
2. Is the information biased?
3. Is the information authentic?
4. Is the information up-to-date?
5. Is the information helpful?
6. What is the source's main idea? Purpose? Audience?
7. What type of evidence does the source offer?
8. What is crucial to the understanding of the topic?
9. How can the sources themselves be grouped?
10. Does the source material suggest something to change my thesis statement?

Collecting information from hard and soft copy materials needs note-taking. Thus, you have to take care of plagiarism. You need to paraphrase the author's idea rather than directly copying the whole thing written in the material. Consulting various sources of information is also expected from you to collect information on your argumentative essay writing topic.

The information you gathered on your writing topic should be appropriate in terms of your argumentative topic, purpose, and audience. You can evaluate its appropriateness using the questions here below.

1. Does the collected information fit my argumentative topic?
2. Does the collected information fit my purpose?
3. Does the collected information fit my readers? Do I have information for introduction?
5. Does the collected information have adequate details?
6. Do I have information for the conclusion?

### **WPS 2.3: Discovering Arrangements**

Discovering arrangements is essential for the good flow of ideas in your essay. You can arrange it in the way you want to flow the idea in the whole parts of the essay. The following probing questions are helpful to do so.

1. Are there any clues in my reading that suggest arrangements?
2. Are there any clues in the composing content that suggest arrangements?
3. Does the basis for my subject-splitting suggest arrangements?
4. Does how I join ideas into a synthesis suggest arrangements?
5. Does the relationship between the parts of my material suggest for arrangements?
6. Does the sectioning of my material in my preliminary draft suggest arrangements?

### **WPS 2.4: Discovering Stylistic Choice**

Look at the following questions and use them to develop the introduction part of your essay.

1. Which of the following interest-catching devices seems appropriate to my subject?  
Purpose? Audience?

Questions    Quotation    Striking details or description    Statistics    Analogy

Narrative or anecdote    startling or unusual facts    A representative example

2. What raw material do I have for my interest-catching device?
3. What material can I generate for my interest-catching device?
4. How can I link my interest-catcher and controlling generalization together?

5. Will my introduction orient my reader to my subject? Purpose?
6. Will it provide necessary information to my readers' understanding of my subject?

The following proving questions can also help you in writing your conclusion.

1. What is the significant point of the paper that should be included in the conclusion?
2. Will my conclusion explicitly or implicitly contain my controlling generalization?
3. What raw material do I have for my conclusion?
4. What material can I generate for my conclusion?
5. Could any of the following devices be incorporated into an effective and appropriate close for my paper?

Summary questions    Personal Application    Quotation narrative

General Application    Analogy    Statistics    Specific details    Speculation

6. Will my conclusion provide a sense of closure for my reader?
7. Will it prompt the reader to think about my ideas beyond the context of the paper itself?

### **WPS 2.5: Using Style to Promote Unity, Specificity, and Coherence**

How are the unity, specificity, and coherence of ideas in your argumentative essay in general? Look at the following questions and revise them accordingly.

1. What is the main idea of my argumentative essay? Its purpose? Its audience?
2. Does my reader have specific expectations concerning my frame?
3. What point of view (person) is appropriate to my subject? Purpose? Audience?
4. Would presenting multiple points of view be appropriate and effective? If so, what would be the best method of their presentation?
5. How can I promote specificity through concrete language, dialogue, lists, tables, or graphs?
6. How can I use sentence combining to reduce vagueness, lack of emphasis, and redundancy?

7. How can I promote coherence through meaningful cohesive devices?

To enhance the quality of your written draft, gaining feedback from peers, the teacher, experts, and even from your family is essential. Write your final draft based on the comments you gained.

**Now, let you assess your argumentative essay writing process, and reflect on what you have learned and how you learned based on the “KWHL” chart.**

**KWHL Chart**

<b>What do I Know?</b>	<b>What do I Want to know?</b>	<b>How do I find out information?</b>	<b>What have I Learned?</b>

Appendix – K: Students’-Written Essay Evaluation Rubric (Writing Performance)

British Council: IELTS TASK-2 Writing band descriptors (Public Version)

Band	Task Achievement	Coherence and Cohesion	Lexical Resource	Grammatical Range and Accuracy
9	<ul style="list-style-type: none"> <li>▪ fully addresses all parts of the task</li> <li>▪ presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas</li> </ul>	<ul style="list-style-type: none"> <li>▪ uses cohesion in such a way that it attracts no attention</li> <li>▪ skilfully manages paragraphing</li> </ul>	<ul style="list-style-type: none"> <li>▪ uses a wide range of vocabulary with very natural and sophisticated control of lexical features; rare minor errors occur only as ‘slips’</li> </ul>	<ul style="list-style-type: none"> <li>▪ uses a wide range of structures with full flexibility and accuracy; rare minor errors occur only as ‘slips’</li> </ul>
8	<ul style="list-style-type: none"> <li>▪ sufficiently addresses all parts of the task</li> <li>▪ presents a well-developed response to the question with relevant, extended and supported idea</li> </ul>	<ul style="list-style-type: none"> <li>▪ sequences information and ideas</li> <li>▪ logically</li> <li>▪ manages all aspects of cohesion well</li> <li>▪ uses paragraphing sufficiently and appropriately</li> </ul>	<ul style="list-style-type: none"> <li>▪ uses a wide range of vocabulary</li> <li>▪ fluently and flexibly to convey precise meanings</li> <li>▪ skilfully uses uncommon lexical items but there may be occasional inaccuracies in word choice and collocation</li> <li>▪ produces rare errors in spelling and/or word formation</li> </ul>	<ul style="list-style-type: none"> <li>▪ uses a wide range of structures</li> <li>▪ the majority of sentences are errorfree</li> <li>▪ makes only very occasional errors or inappropriacies</li> </ul>
7	<ul style="list-style-type: none"> <li>▪ addresses all parts of the task</li> <li>▪ presents a clear position throughout the response</li> <li>▪ presents, extends and supports main ideas, but there may be a tendency to overgeneralise and/or supporting ideas may lack focus</li> </ul>	<ul style="list-style-type: none"> <li>▪ logically organises information and ideas; there is clear progression throughout</li> <li>▪ uses a range of cohesive devices appropriately although there may be some under-/over-use</li> </ul>	<ul style="list-style-type: none"> <li>▪ uses a sufficient range of vocabulary to allow some flexibility and precision</li> <li>▪ uses less common lexical items with some awareness of</li> </ul>	<ul style="list-style-type: none"> <li>▪ uses a variety of complex structures</li> <li>▪ produces frequent error-free sentences</li> <li>▪ has good control of grammar and punctuation but may</li> </ul>

		<ul style="list-style-type: none"> <li>presents a clear central topic within each paragraph</li> </ul>	<p>style and collocation</p> <ul style="list-style-type: none"> <li>may produce occasional errors in word choice, spelling and/or word formation</li> </ul>	<p>make a few errors</p>
<b>6</b>	<ul style="list-style-type: none"> <li>addresses the task only partially; the format may be inappropriate in places</li> <li>expresses a position but the development is not always clear and there may be no conclusions drawn</li> <li>presents some main ideas but these are limited and not sufficiently developed; there may be irrelevant detail</li> </ul>	<ul style="list-style-type: none"> <li>presents information with some organisation but there may be a lack of overall progression</li> <li>makes inadequate, inaccurate or over use of cohesive devices</li> <li>may be repetitive because of lack of referencing and substitution</li> <li>may not write in paragraphs, or paragraphing may be inadequate</li> </ul>	<ul style="list-style-type: none"> <li>uses an adequate range of vocabulary for the task</li> <li>attempts to use less common vocabulary but with some inaccuracy</li> <li>makes some errors in spelling and/or word formation, but they do not impede communication</li> </ul>	<ul style="list-style-type: none"> <li>uses a mix of simple and complex sentence forms</li> <li>makes some errors in grammar and punctuation but they rarely reduce communication</li> </ul>
<b>5</b>	<ul style="list-style-type: none"> <li>addresses the task only partially; the format may be inappropriate in places</li> <li>expresses a position but the development is not always clear and there may be no conclusions drawn</li> <li>presents some main ideas but these are limited and not sufficiently developed; there may be irrelevant detail</li> </ul>	<ul style="list-style-type: none"> <li>presents information with some organisation but there may be a lack of overall progression</li> <li>makes inadequate, inaccurate or over use of cohesive devices</li> <li>may be repetitive because of lack of referencing and substitution</li> <li>may not write in paragraphs, or paragraphing may be inadequate</li> </ul>	<ul style="list-style-type: none"> <li>uses a limited range of vocabulary, but this is minimally adequate for the task</li> <li>may make noticeable errors in spelling and/or word formation that may cause some difficulty for the reader</li> </ul>	<ul style="list-style-type: none"> <li>uses only a limited range of structures</li> <li>attempts complex sentences but these tend to be less accurate than simple sentences</li> <li>may make frequent grammatical errors and punctuation may be faulty; errors can cause some difficulty for the reader</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>responds to the task only in a minimal way or the answer is tangential; the format may be inappropriate</li> <li>presents a position but</li> </ul>	<ul style="list-style-type: none"> <li>presents information and ideas but these are not arranged coherently and there is no clear</li> </ul>	<ul style="list-style-type: none"> <li>uses only basic vocabulary which may be used repetitively or which may</li> </ul>	<ul style="list-style-type: none"> <li>uses only a very limited range of structures with only rare use of</li> </ul>

	<p>this is unclear</p> <ul style="list-style-type: none"> <li>presents some main ideas but these are difficult to identify and may be repetitive, irrelevant or not well supported</li> </ul>	<p>progression in the response</p> <ul style="list-style-type: none"> <li>uses some basic cohesive devices but these may be inaccurate or repetitive</li> <li>may not write in paragraphs or their use may be confusing</li> </ul>	<p>be inappropriate for the task</p> <ul style="list-style-type: none"> <li>has limited control of word formation and/or spelling; errors may cause strain for the reader</li> </ul>	<p>subordinate clauses</p> <ul style="list-style-type: none"> <li>some structures are accurate but errors predominate, and punctuation is often faulty</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>does not adequately address any part of the task</li> <li>does not express a clear position</li> <li>presents few ideas, which are largely undeveloped or irrelevant</li> </ul>	<ul style="list-style-type: none"> <li>does not organise ideas logically</li> <li>may use a very limited range of cohesive devices, and those used may not indicate a logical relationship between ideas</li> </ul>	<ul style="list-style-type: none"> <li>uses only a very limited range of words and expressions with very limited control of word formation and/or spelling</li> <li>errors may severely distort the message</li> </ul>	<ul style="list-style-type: none"> <li>attempts sentence forms but errors in grammar and punctuation predominate and distort the meaning</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>barely responds to the task</li> <li>does not express a position</li> <li>may attempt to present one or two ideas but there is no development</li> </ul>	<ul style="list-style-type: none"> <li>has very little control of organisational features</li> </ul>	<ul style="list-style-type: none"> <li>uses an extremely limited range of vocabulary; essentially no control of word formation and/or spelling</li> </ul>	<ul style="list-style-type: none"> <li>cannot use sentence forms except in memorised phrases</li> </ul>
<b>1</b>	<ul style="list-style-type: none"> <li>answer is completely unrelated to the task</li> </ul>	<ul style="list-style-type: none"> <li>fails to communicate any message</li> </ul>	<ul style="list-style-type: none"> <li>can only use a few isolated words</li> </ul>	<ul style="list-style-type: none"> <li>cannot use sentence forms at all</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>does not attend</li> <li>does not attempt the task in any way</li> <li>writes a totally memorised response</li> </ul>			

**Students' Test Result Report Sheet (*Writing Performance*)**

<b>Students' Code</b>	<b>Task Achievement</b> (9 points)	<b>Coherence and Cohesion</b> (9 points)	<b>Lexical Resource</b> (9 points)	<b>Grammatical Range and Accuracy</b> (9 points)	<b>Total</b> (36 points)	<b>100%</b>
<b>1</b>						
<b>2</b>						
<b>3...35</b>						

Appendix – L: Students’ Test Result Raw Data (*Writing Performance*)

<b>Student Code</b>	<b>Pre-test: 1</b>	<b>Pre-test: 2</b>	<b>Pore-test: 3</b>	<b>Post-test: 1</b>	<b>Post-test: 2</b>	<b>Post-test: 3</b>
1	64	74	69	50	73	63
2	57	42	36	55	50	51
3	21	55	26	35	31	51
4	56	32	68	56	62	58
5	50	74	85	74	76	76
6	48	48	25	33	39	57
7	33	28	33	36	28	50
8	24	32	24	26	37	48
9	77	73	74	74	79	69
10	18	44	42	36	44	48
11	68	28	76	51	64	71
12	42	46	54	51	51	61
13	48	44	46	51	38	48
14	61	46	74	46	86	75
15	30	36	33	38	50	51
16	21	36	20	28	47	51
17	51	35	35	41	22	48
18	21	17	16	33	39	47
19	31	11	28	38	31	48
20	59	64	50	57	62	63
21	52	50	46	48	52	51
22	40	50	50	55	64	67

23	69	61	60	60	72	73
24	26	28	29	36	33	49
25	28	35	42	33	39	44
26	29	53	53	51	36	57
27	30	56	51	60	72	71
28	29	29	51	48	64	73
29	28	36	18	54	31	57
30	41	56	64	58	78	67
31	50	51	48	64	64	50
32	28	36	18	36	44	38
33	35	33	37	38	46	37
34	45	34	33	36	46	51
35	31	31	38	40	50	32

## Appendix – M: Core Critical Thinking Skills in Argumentative Essay

### Writing

(Adapted from Facione, 2015)

**1. Interpretation:** The students comprehend and expressed the meaning of their writing issues and judgments in their essays. The students recognized the then argumentative issues and described them in their essays. They collected data on their topics and constructed categories of proponent and opponent ideas for their argumentative essay development. They paraphrased ideas taken from other sources in their own words. These writing tasks indicate that when students have worked together on academic Web-based project via Google Docs, the students have developed their interpretation skills which are among the core critical thinking skills.

**2. Analysis:** The students identified the intended and actual inferential relationships among statements to express beliefs in their writing. The students examined ideas, detected and analyzed arguments in their argumentative writing. They identified the similarities and differences between opposing ideas in developing their persuasive argumentative essays. They drafted the relationship of sentences or/and paragraphs to each other and the main purpose of their argumentative essays. The students constructed convincing reasons to support or criticize a given argumentative idea, and reach a strong conclusion. It shows that the students have enhanced their analysis skills which is one of the core critical thinking skills.

**3. Evaluation:** When the students wrote argumentative essays, they determined the credibility of their source of information while they gathered data on their writing topics. They assessed and compared the logical strengths and weaknesses of opposing arguments. They also judged if the evidence at their hands did not contradict each other, and support their conclusion. Finally, they judged if their arguments in their argumentative essays were relevant and applicable in an existing real-life situation. It implies that the students have developed their evaluation skills, one of the core critical thinking skills.

**4. Inference:** The students have enhanced their inference skills in writing their argumentative essays. This is because the students have identified pertinent thoughts needed to draw reasonable conclusions in their essays. In doing so they formed conjectures and hypotheses; consider relevant information and deduce consequences flowing their data. They questioned their evidence, conjecture alternatives, and draw conclusions when they developed

argumentative essays through working collaboratively on the given academic Web-based projects. The students constructed meaning from their readings and formulated a synthesis of related ideas into a coherent perspective to produce sound argumentative essays.

**5. Explanation:** Beyond interpretation, analysis, evaluation, and inference, the students explained what they think, and how they arrived at their judgment in their learning process. In other terms, the students have developed their explanation skills due to Web-based collaborative instruction, or academic Web-based projects using Google Docs. The students presented their argumentative essays in a cogent and coherent way. They stated and justified reasons in terms of their evidential and contextual considerations upon which their results were based. They presented their reasons in the form of persuasive arguments. They also reflected on (in the classroom) the methods, procedures, and techniques they used in writing their argumentative essays.

**6. Self-regulation:** the data gained from the student-reflective journal and focus group discussion revealed that the students have developed their self-regulation skills which is one of the core critical thinking skills. Accordingly, the students confirmed that they self-consciously monitored or corrected their judgments in analyzing and evaluating contradictory ideas in producing their argumentative essays. They questioned themselves to examine, correct, and confirm their reasons for producing essays. They double-checked their reasons by recalculating their evidence. The students reconsidered their interpretations and judgments in the view of further analysis. They revised their reasons in view of the errors they discovered in their argumentative essay writing. Then, they changed their conclusions in view of the realization that they had misjudged the importance of certain factors when coming to their earlier decisions

**Students' Test Results Report Sheet** (*Critical Thinking Skills*)

<b>Students' Code</b>	<b>Interpretation</b> (20 points)	<b>Analysis</b> (20 points)	<b>Inference</b> (20 points)	<b>Evaluation</b> (20 points)	<b>Explanation</b> (20 points)	<b>Total Score</b> (100%)
<b>1</b>						
<b>2</b>						
<b>3....35</b>						

Appendix – N: Students’ Test Result Raw Data (*Critical Thinking Skills*)

<b>Students’ Code</b>	<b>Pre-test:1</b>	<b>Pre-test: 2</b>	<b>Pre-test: 3</b>	<b>Post-test: 1</b>	<b>Post-test: 2</b>	<b>Post-test: 3</b>
1	78	72	65	65	75	74
2	56	30	32	45	47	38
3	18	36	35	34	27	50
4	55	59	75	54	58	68
5	57	70	65	71	75	74
6	33	31	20	31	45	49
7	47	36	29	33	37	37
8	16	43	43	34	27	55
9	71	71	65	71	75	72
10	27	25	21	23	61	43
11	66	41	71	50	44	69
12	45	28	35	47	31	39
13	38	41	51	61	47	57
14	58	42	71	49	81	71
15	35	25	20	43	43	49
16	18	33	47	26	47	34
17	46	33	37	38	35	60
18	38	11	34	37	19	43
19	17	19	47	29	31	31
20	53	61	59	46	60	49
21	47	47	35	55	47	60
22	57	53	52	49	61	56

23	73	46	47	56	69	67
24	25	25	28	30	36	52
25	58	39	37	32	27	47
26	24	50	48	48	33	60
27	21	46	46	57	60	68
28	24	51	41	50	69	64
29	25	42	50	27	38	55
30	46	54	61	56	75	70
31	38	46	44	59	61	66
32	33	49	31	35	44	44
33	31	33	23	23	41	45
34	41	31	28	38	46	35
35	28	35	28	33	46	44

Appendix – O: Students’ Pre-intervention Questionnaire Result Raw Data

Student Code	Item																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	4	3	2	5	4	2	3	2	2	4	5	1	4	3	1	1	3	4	4	4	4	1	3	4
2	2	2	3	3	4	4	5	2	2	4	5	5	4	2	4	4	4	4	4	4	4	4	4	2
3	4	2	1	4	4	3	3	1	4	3	3	5	4	4	4	3	5	3	5	3	1	1	2	5
4	3	4	4	5	4	4	2	2	3	4	5	5	3	5	5	5	3	5	3	4	4	3	3	5
5	4	1	4	5	5	3	4	4	1	4	5	2	3	5	5	5	4	5	5	3	4	4	2	4
6	4	4	3	4	4	3	4	3	4	1	4	4	2	4	5	4	4	4	4	4	4	4	3	4
7	5	4	3	3	3	3	3	2	1	1	4	4	3	2	4	3	5	3	3	3	4	3	4	4
8	4	3	3	4	4	3	3	1	4	3	3	3	4	3	3	4	3	3	3	4	3	4	3	4
9	2	5	3	3	4	4	4	3	4	1	5	4	2	4	5	3	5	5	4	3	4	4	4	3
10	4	4	4	5	4	2	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	2	3	3
11	4	4	3	4	4	3	4	3	4	3	4	4	3	3	4	4	4	3	4	4	4	3	3	4
12	4	3	4	3	2	3	4	3	1	3	4	3	5	4	3	3	3	4	3	4	3	3	3	4
13	3	4	4	4	4	3	4	3	4	4	5	4	4	2	4	4	5	4	5	4	5	5	4	5
14	2	4	2	4	3	2	4	1	4	4	5	4	4	4	5	5	3	4	4	2	3	3	2	2
15	4	3	3	4	3	3	4	4	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3
16	4	4	2	4	4	4	4	1	1	3	4	2	5	5	5	5	5	5	3	3	4	4	5	3
17	5	4	4	2	2	4	4	3	4	4	5	3	4	4	3	4	4	2	5	4	5	4	5	4
18	3	4	3	3	3	4	3	3	4	3	3	4	3	5	5	3	5	3	5	5	5	4	4	4

<b>19</b>	2	3	3	4	4	3	4	1	4	1	4	4	3	4	4	4	4	3	3	4	3	3	4	4
<b>20</b>	4	4	4	4	4	1	5	3	4	4	2	4	4	2	4	3	5	3	4	3	4	5	5	4
<b>21</b>	2	4	4	4	5	3	5	4	4	4	5	5	3	3	4	4	5	3	5	3	5	3	5	3
<b>22</b>	4	3	3	2	4	2	4	4	4	4	5	3	3	4	3	5	3	3	5	5	3	3	4	3
<b>23</b>	4	3	2	3	4	3	4	3	4	4	4	3	4	3	5	5	3	4	4	4	5	3	5	4
<b>24</b>	4	3	2	4	2	2	4	3	4	4	4	2	3	2	3	3	3	3	3	3	3	4	4	3
<b>25</b>	5	4	4	5	5	4	4	4	4	4	4	4	2	3	5	5	3	5	5	4	4	4	3	3
<b>26</b>	4	4	2	4	5	4	5	2	4	4	4	2	3	3	5	5	2	3	5	5	4	5	3	4
<b>27</b>	4	3	4	4	5	3	3	1	5	5	4	3	3	5	4	3	3	3	3	3	3	3	2	4
<b>28</b>	2	2	4	5	5	4	4	4	5	5	3	3	5	3	3	4	5	3	4	5	3	3	3	3
<b>29</b>	4	2	2	4	4	3	4	4	4	3	5	2	3	5	4	3	3	4	3	4	4	4	4	3
<b>30</b>	3	3	3	3	4	3	3	3	3	4	2	2	4	4	4	3	4	3	3	3	3	3	3	3
<b>31</b>	4	3	3	4	4	3	4	4	4	4	3	4	4	4	3	4	4	4	1	4	4	4	3	4
<b>32</b>	4	4	4	4	4	4	4	3	4	4	2	2	2	3	4	3	5	3	5	3	5	3	2	3
<b>33</b>	4	3	4	4	4	3	4	3	4	4	4	4	2	3	4	5	3	2	5	2	3	4	4	3
<b>34</b>	4	4	4	4	4	3	3	3	3	4	2	4	2	4	2	5	5	5	4	4	5	3	3	3
<b>35</b>	4	2	2	5	5	5	4	3	5	5	4	5	3	2	5	5	5	5	4	4	5	3	3	3

Appendix – P: Students’ Post-intervention Questionnaire Result Raw Data

Student Code	Item																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	4	4	2	3	5	4	3	5	5	4	5	4	4	3	1	3	2	2	4	4	4	1	4	4
2	4	4	4	4	4	4	5	2	5	4	5	5	4	4	4	4	4	4	4	4	4	4	4	2
3	1	2	1	4	4	3	3	1	4	4	4	5	4	4	4	5	4	5	4	5	1	1	5	5
4	4	4	5	5	5	4	5	4	5	5	5	5	5	5	5	5	5	5	5	4	4	5	4	5
5	5	5	5	5	5	4	5	4	5	5	5	4	5	5	5	5	4	5	4	4	4	4	4	4
6	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	3	4	4
7	5	4	4	3	4	4	4	2	4	4	4	4	4	4	4	5	5	5	2	5	4	4	4	4
8	4	3	3	4	4	4	3	3	4	3	3	3	4	3	3	4	3	4	3	4	3	4	3	4
9	4	5	3	3	5	4	4	3	4	4	5	4	4	4	5	5	5	5	4	4	4	4	4	3
10	4	4	4	5	4	4	4	4	5	4	3	3	3	3	3	3	3	3	5	3	3	3	3	3
11	4	4	3	4	4	3	4	4	4	4	4	4	3	3	4	4	4	4	4	4	4	4	4	4
12	4	4	3	4	4	3	4	3	3	3	4	3	3	4	3	3	3	4	4	4	5	5	3	4
13	3	4	4	4	4	4	4	3	4	4	5	5	4	4	4	4	2	4	5	4	5	5	4	3
14	5	4	4	5	5	4	4	4	4	4	5	4	4	4	5	5	5	4	4	2	3	3	5	2
15	4	4	3	4	3	3	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	4	4	3
16	4	4	4	5	4	4	4	4	5	3	4	5	5	5	5	5	5	5	5	2	4	4	5	5
17	5	4	4	2	5	5	4	3	4	4	5	3	4	4	3	4	4	2	5	4	5	3	3	4
18	4	3	3	5	4	4	4	4	4	3	4	4	3	4	4	4	4	4	4	4	3	3	4	4

<b>19</b>	4	3	3	5	4	4	4	4	4	3	4	4	3	4	4	4	4	4	4	4	3	3	4	4	
<b>20</b>	4	4	4	5	5	4	5	3	4	4	5	4	4	5	4	5	5	5	4	5	4	5	3	4	
<b>21</b>	4	4	4	5	5	4	5	4	5	4	5	5	5	4	4	4	5	4	5	5	5	3	5	4	
<b>22</b>	4	4	3	4	4	2	4	4	5	4	5	4	4	4	5	5	5	4	5	5	3	4	4	4	
<b>23</b>	5	4	4	3	4	4	4	3	4	4	4	3	4	5	5	5	1	4	4	4	5	3	4	1	
<b>24</b>	4	4	4	4	4	2	4	4	4	4	4	4	4	4	3	4	4	4	3	4	3	4	4	3	
<b>25</b>	5	5	4	5	5	4	5	5	4	4	4	4	3	3	5	2	5	5	5	4	4	4	3	4	
<b>26</b>	4	5	4	5	5	5	5	5	4	4	4	5	5	5	4	5	5	4	5	5	4	3	5	4	
<b>27</b>	4	4	4	4	5	4	3	4	5	5	3	3	3	3	3	3	3	3	4	3	3	3	5	5	3
<b>28</b>	4	4	5	5	5	4	5	4	5	5	5	4	5	5	4	4	5	5	4	5	5	3	5	5	
<b>29</b>	4	2	4	4	4	4	4	4	4	3	4	4	4	4	4	3	4	4	4	3	4	4	4	3	
<b>30</b>	4	4	3	3	4	3	4	3	3	4	3	4	4	3	3	3	4	3	3	3	3	3	3	3	
<b>31</b>	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	
<b>32</b>	4	4	4	5	4	5	4	3	4	4	5	5	5	4	4	2	5	5	2	3	5	3	4	3	
<b>33</b>	4	4	4	4	4	3	4	3	4	4	4	4	4	3	4	5	5	3	5	2	5	5	3	3	
<b>34</b>	4	4	4	4	4	4	3	4	3	3	5	4	4	4	5	4	4	4	3	3	4	3	4	4	
<b>35</b>	5	2	2	5	5	5	5	5	3	5	4	5	3	2	5	5	5	5	4	4	5	3	5	3	

## Appendix – Q: Students’ Focus Group Discussion Response

**Question-1: Do you think that using academic Web-based collaborative writing projects specifically, via Google Docs increases your motivation towards writing such as your willingness and preference? If so, how?**

**Respondent-1:** Thank you. My answer for this question is yes, because it is preferable than the familiar/ face-to-face learning due to it helps in order to easily share ideas with our group friends and teachers using our smart phone and computer outside the class-room.

**Respondent-2:** Yes, I share his ideas too. In addition, why I am attracted in learning writing using academic Web-based projects specifically, using Google Docs because it provides us a chance to practice writing/ do the given writing activities/projects in the place and time that i want to do or practice.

**Respondent-3:** My idea is the same like my friends, but it tiresome in practicing writing at essay level using smart phone since it takes time to copy my writing draft on the phone. I suggest computer for this. Smart phone can be preferable and attractive in practicing writing at word or paragraph level.

**Respondent-4:** Yes, it increases my motivation towards writing because it provides a chance to find information for our essay by easily searching evidences for my writing using internet, search engine etc. while the process of writing. Then, it enables me to freely discover topic for my writing and produce my own essay using it.

**Respondent-5:** Yes, because learning using academic Web-based collaborative writing specifically, via Google docs has various advantages like: it gives a chance to develop our writing through practicing outside the classroom with internet connection when can’t write in the classroom.

**Respondent-6:** I have the same idea

**Respondent-7:** I have the same idea

**Respondent-8:** Leave the discussion

**Respondent-9:** I have the same idea

**Question-2: Do you think that learning using academic Web-based collaborative writing projects specifically, via Google Docs in writing classes enhances your argumentative essay writing performance in line with task achievement, coherence and cohesion, lexical resource, and grammatical range and accuracy? If so, how?**

**Respondent-1:** Yes, because it provides us a lot chances to practice the skill in the place and time which we prefer.

**Respondent-2:** Yes, because, Google Docs provides us a good opportunity to develop our writing skill through mitigating problems that encountered in line with time usage and feedback giving process

**Respondent-3:** I have the same idea.

**Respondent-4:** I have the same idea.

**Respondent-5:** Yes, like my friend explained, it is an important writing plat form that enabled us to practice our writing skill without place and time boundary. Therefore, many of us can write good argumentative essay in terms of task achievement, coherence and cohesion, lexical resource, and grammatical range and accuracy.

**Respondent-6:** Yes, because it was too unique since it helped us in searching/looking for different information including the meaning of new words/ unfamiliar terms in constructing the essay through using search engine, internet and among other options. However, lack of technical skill to use Google Docs actively, lack of trained/habit to use Google to work on collaborative writing tasks/ projects regularly were the main challenges.

**Respondent-7:** Yes, all my ideas are explained by my friends.

**Respondent-8:** Yes, it was good in developing our writing, but practicing writing at essay writing with smart phone was tiresome, because it took time to copy my writing draft on the app to share for my friends. I suggest it 'd be good practicing computer.

**Respondent-9:** Yes, I share all my friend idea in this regard. More particularly, I suggest using computer instead of smart phone is good, because it was also tiresome for me while I was practicing writing essay through my cell phone /smart phone.

**Question-3: Do you think that using academic Web-based collaborative writing projects specifically, via Google Docs in writing classes empowers your critical thinking skills which include (interpretation, analysis, evaluation, inference, description, and self-regulation)? If so, how?**

**Respondent-1:** Yes, as to me, I had brought good progress in my critical thinking skills. Because the plat form was very suitable to develop the critical thinking skills in writing through working together on argumentative essay writing tasks/projects.

**Respondent-2:** I have the same idea.

**Respondent-3:**

**Respondent-4:** Yes, when I evaluate my critical thinking skills after intervention, I can say, I have seen good changes. Specially, in the manner I evaluate issues/ points for my writing, the way I explain my point of argument as a writer supporting with good evidences since Google Docs gives good opportunity for this. In addition, it helps me to develop my inference and analysis skills through sharing ideas for my group mates. As a result, now, I can write argumentative essay independently through regulating my writing myself.”

**Respondent-5:** I have the same idea.

**Respondent-6:** I have the same idea.

**Respondent-7:** I have the same idea.

**Respondent-8:** Yes, as we are English major students, we are expected to critically write texts and evaluate the given text critically for the future. In achieving these objectives, working on academic Web-based collaborative writing projects/tasks using Google Docs can be the best way if challenges that we mentioned in under second questions are mitigated to use it properly by all students. It can also be used besides with the conventional way learning until challenges are totally solved/ avoided.

**Respondent-9:** I share my friends' idea.

**Question-4: If you have developed your critical thinking skills while you used using academic Web-based collaborative writing projects specifically, via Google Docs in writing classes, do you think that critical thinking skills are helpful to your real-life situations?**

**Respondent-1:** Yes

**Respondent-2:** Sure, because, the critical thing skills we reflect in real-life context are the skills that we experience in the class-room.

**Respondent-3:** Yes, because often apply what we practice in writing class in the real-life context beyond the class-room.

**Respondent-4:** I have the same idea.

**Respondent-5:** Yes

**Respondent-6:** Yes

**Respondent-7:** Yes

**Respondent 1:** Because as to me, the critical thinking skills we apply in real-life context beyond the class-room is the direct reflection of what we experience and practice in the classroom in writing class and other subjects too.

**Respondent-2:** I share respondent-1 rational for this question.

**Respondent-3:** I share my friends' idea

**Respondent-4:** I share my friends' idea

**Respondent-5:** I share my friends' idea.

**Respondent-6:** I share my friends' idea.

**Respondent-7:** I share my friends' idea.

**Respondent-8:** I my friends' idea.

**Respondent-9:** Yes, as respondent-1 explained, the critical thinking skills we apply in real-life context beyond the class-room is the direct reflection of what we experience and practice in the classroom in writing class and other subjects too.

**Question-5: What are the benefits and limitations of learning using academic**

**Web-based collaborative writing projects specifically, via Google Docs in argumentative writing class?**

**Respondent-1:** It is obvious that Google Docs as an online collaborative writing application provide has various benefits like: it is easy and free to access, it facilitates the process of collaboration at the fastest rate, it enables to give and receive feedback and among others. However, we cannot use Google Docs in the places where there is no internet connection except reading the formerly downloaded documents via it

**Respondent-2:** In addition to what she stated, it helps us to get information for our writing using other alternatives like: the internet, search engine etc. But lack of technical skill and a trained in learning through Web-application make the process challenging at beginning.

**Respondent-3:** I share my friends' idea.

**Respondent-4:** Particularly, as to me in practicing writing argumentative essay it is more appropriate, because it provides us the opportunity to support our arguments with strong evidence and write effective essay through getting information, and observing model

argumentative essays via internet. But we can do all this using Google Docs and other searching options when there is only internet connection.

**Respondent-5:** I share my friends' idea.

**Respondent-6:** I share my friends' idea.

**Respondent-7:** I share my friends' idea.

**Respondent-8:** Many of the benefits of learning writing argumentative essay through academic Web-based projects are explained by my friends. But learning through Web-based applications like: Google Docs requires lot of exposure for practice and good technical skill in order to bring the desired change.

**Respondent-9:** I share my friends' idea.

**Question-6: What are the challenges learning through using academic Web-based Collaborative writing projects specifically, via Google Docs in argumentative writing class?**

**Respondent-1:** We have already explained the challenges in first two questions. Weak internet connection, lack of technical skill to use the app properly was among the challenges.

**Respondent-2:** In addition, lack of appropriate device to practice writing using the app was the other challenge. For example, the smart phone some of us had weak to use the app properly.

**Respondent-3:** I have the same idea.

**Respondent-4:** Many of us also were new for Web-based learning/ we never had the exposure to do writing tasks using the app, as a result we forget to work tasks during intervention. Therefore, it requires to prepare a reminder until students experience working tasks using it.

**Respondent-5:** I share my friends' idea.

**Respondent-6:** I share my friends' idea

**Respondent-7:** It is all my friends explained.

**Respondent-8:** I share my friend' idea.

**Respondent-9:** I share all the ideas raised by my friends. Specifically, using smartphone to practice writing at essay level was the other challenge, because it takes time to type the writing draft on the app and to share our friend timely.

**Question-7: Do you have any idea that you want to add about learning using academic Web-based collaborative writing collaborative writing projects specifically, via Google Docs? If so, please express your idea.**

**Respondent-1:** Yes, I found it was very important. But it requires additional training to be more familiar with the app in working on the writing tasks collaboratively and properly.

**Respondent-2:** Yes, it needs more exposure to practice by taking more detail awareness about the app, and as to me, it is more attractive than that of the conventional/face-to-face collaborative approach.

**Respondent-3:** Yes, I share all my friends' ideas, but to bring a dramatical change on our writing performance, all challenges/problems that we faced should be mitigated or fully avoided.

**Respondent-4:** I share my friends' idea.

**Respondent-5:** I have the same idea.

**Respondent-6:** I have the same idea

**Respondent-7:** I have the same idea

**Respondent-8:** Yes, it is important to make the learning environment conducive for Web-based learning by reducing factors that influence/hinder the process.

**Respondent-9:** I share all my friends' idea.

## Appendix-R: Assumptions of One-way Repeated Measures MANOVA

Before conducting the one-way repeated measures MANOVA, a series of tests were performed to test the seven assumptions. The first assumption of one-way repeated measures MANOVA is there should be two or more dependent variables measured at the interval or ratio level. In the present study, there were two dependent variables; writing performance and critical thinking skills which were measured from 0 to 100 and the result showed that the assumption has been met. The second assumption is there should be one or more independent variables that consist of two or more categorical, related groups. In this study, there was one independent variable (the intervention, Collaborative writing using Google Docs) with six related groups, pretest one to pretest three and post-test one to post-test three. In the third place, there should be adequate sample size to run the test. There were 35 participants, in this study, which shows that the sample size was adequate to run the one-way repeated measures MANOVA.

In the fourth place, there should be no univariate or multivariate outliers which can be checked in SPSS using the Mahalanobis distance. In the current study, there were two dependent variables as it is stated above. The maximum calculated value of the Mahalanobis distance, in this study, was 11.657 which is less than the critical value, 13.82. It indicates that there were no multivariate outliers in the data. It indicates that there were no multivariate outliers in the data. Fifthly, there should be multivariate normality which is often checked with Shapiro-Wilktest since it is a specific test for normality. The p-value of Shapiro-Wilktest should be insignificant to be a data normal. In this case, while the minimum p-value of this test, in the present study, was 0.06, all of the p-values were insignificant (greater than 0.05) which shows that the data was normal. Besides, the histogram and the normal Q-Q plot graphs also indicated that the data were normally distributed.

Sixth, there should be a linear relationship between each pair of dependent variables for each related group of the independent variable. Linearity can be tested by plotting a scatterplot matrix. In this study, the dots in the scatterplot matrix made straight lines which showed that there was a linear relationship between each pair of the dependent variables. Finally, there should be no multicollinearity, which means the independent variables should be moderately correlated. Even though the cut-off points are debatable among researchers, commonly, the minimum and maximum cut-off points are 0.2 and 0.9 respectively (Laerd Statistics, 2018).

In the present study, the correlation values of the dependent variables were between 0.448 and 0.842 which indicated that there was no multicollinearity. Apart from these assumptions, the Mauchly's Test of Sphericity was also insignificant for both dependent variables, writing performance ( $p = 0.121$ ) and critical thinking skills ( $p = 0.057$ ) which indicated that the data were normal. In sum, the assumptions of the one-way repeated measures MANOVA were met, and the test had been run to determine the effects of the intervention on students' writing performance and critical thinking skills. The SPSS outputs of these seven assumptions are presented below:

**1. There should be two or more dependent variables measured at the interval or ratio level (i.e., they are continuous variables) such as exam performance (measured from 0 to 100).**

In the present study, there were two dependent variables; writing performance and critical thinking skills which were measure from 0 to 100 which shows the assumption has been met.

**2. There should be one or more independent variables that consist of two or more categorical, related groups.** Groups can be considered to be related when a participant is measured at all-time points or receives all treatments. Alternatively, participants can be matched (e.g., twins, family members). Whilst groups should be related, participants should be independent, such that one participant should not be able to influence the scores of another participant.

In the present study, there was one independent variable (the intervention, Collaborative writing using Google Docs) with six related groups, pretest one to pretest three and posttest one to posttest three.

**3. There should be adequate sample size. Mostly, it is advised to have a minimum of 20 participants to run a one-way repeated measures MANOVA.**

There were 35 participants in this study which shows that the sample size was adequate to run the one-way repeated measures MANOVA.

**4. There should be no univariate or multivariate outliers.**

Multivariate Outliers can be checked in SPSS using the Mahalanobis distance. To be free of multivariate outliers, the maximum value of the Mahalanobis distance should be less than the Critical Value of Chi-square table). The Critical Value is determined by using a critical values of Chi-square table which depends the number of dependent variables. (For instance, the critical value of the Mahalanobis distance for two dependent variables is 13.82).

In this study, there were two dependent variables. The maximum calculated value of the Mahalanobis distance in this study was 11.657 which is less than the critical value, 13.82. It shows that there were no multivariate outliers in the data.

Table

Residuals Statistics <sup>a</sup>					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	5.83	30.87	18.00	6.144	35
Std. Predicted Value	-1.982	2.095	.000	1.000	35
Standard Error of Predicted Value	3.984	8.192	6.146	.921	35
Adjusted Predicted Value	3.87	34.97	18.40	7.776	35
Residual	-16.311	19.838	.000	8.201	35
Std. Residual	-1.600	1.946	.000	.804	35
Stud. Residual	-1.959	2.210	-.017	1.005	35
Deleted Residual	-24.973	25.586	-.405	12.935	35
Stud. Deleted Residual	-2.107	2.448	-.025	1.045	35
Mahal. Distance	4.222	20.983	11.657	3.569	35
Cook's Distance	.000	.219	.045	.056	35
Centered Leverage Value	.124	.617	.343	.105	35

a. Dependent Variable: id

## 5. Multivariate Normality

There should be multivariate normality. Multivariate normality can be tested in SPSS statistics using numerical methods such as the Shapiro-Wilk test of normality and graphical methods such as histograms and Normal Q-Q plots.

### 5.1. Shapiro-Wilk test of normality

The *Shapiro-Wilk* test is used because it is a specific test for normality than the Kolmogorov-Smirnov test which is more general. Thus, the *p*-value of *Shapiro-Wilk* test should be insignificant to be a data normal. In this case, while the minimum *p*-value of the *Shapiro-Wilk*

test in the present study was 0.06, all of the *p-values were* insignificant (greater than 0.05) which shows that the data was normal.

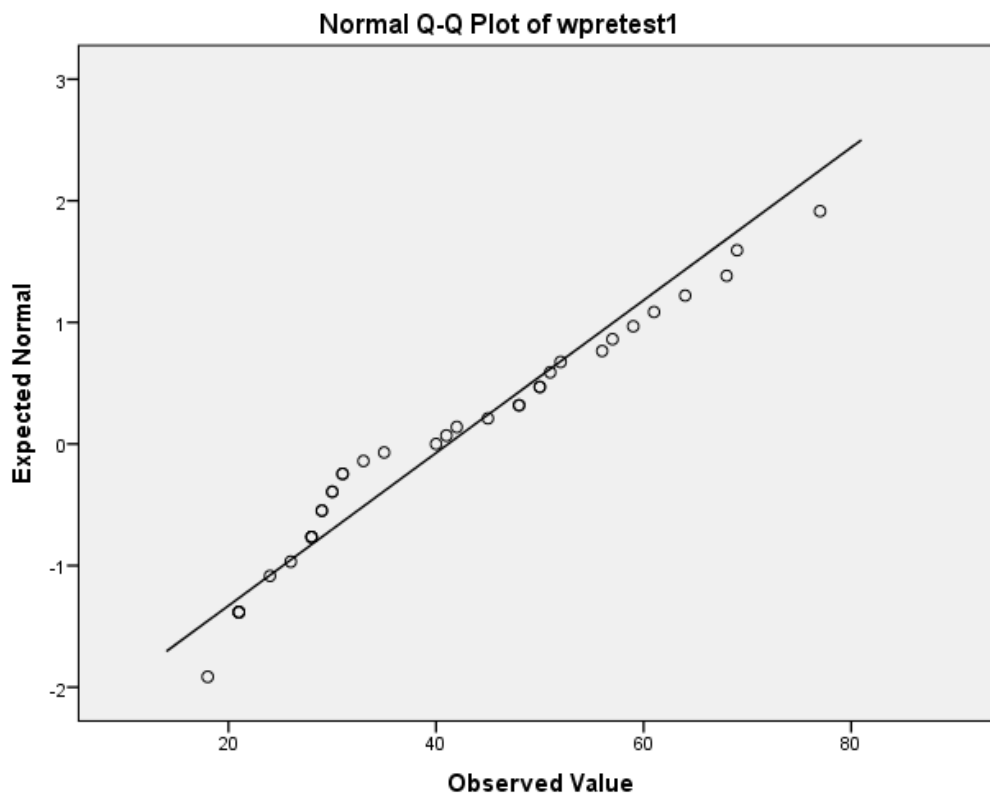
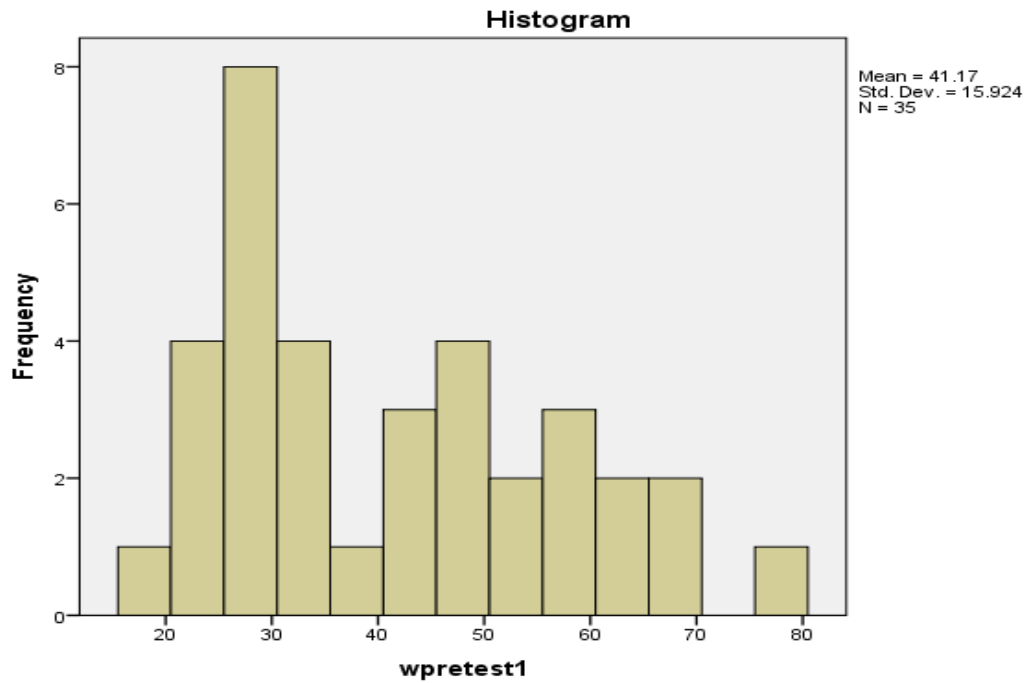
## Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
wpretest1	.167	35	.015	.941	35	.062
wpretest2	.121	35	.200 <sup>*</sup>	.970	35	.452
wpretest3	.153	35	.037	.943	35	.069
wposttest1	.154	35	.035	.949	35	.108
wposttest2	.115	35	.200 <sup>*</sup>	.957	35	.184
wposttest3	.204	35	.001	.944	35	.076
cpretest1	.093	35	.200 <sup>*</sup>	.956	35	.170
cpretest2	.079	35	.200 <sup>*</sup>	.976	35	.613
cpretest3	.117	35	.200 <sup>*</sup>	.952	35	.135
cposttest1	.126	35	.175	.959	35	.212
cposttest2	.179	35	.006	.951	35	.124
cposttest3	.109	35	.200 <sup>*</sup>	.952	35	.134

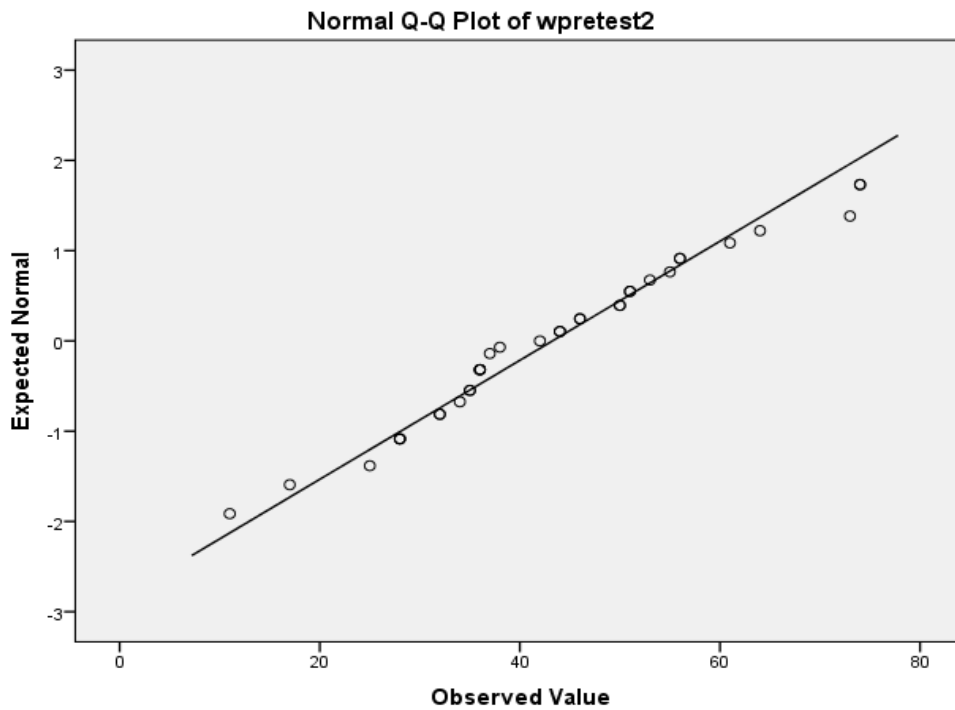
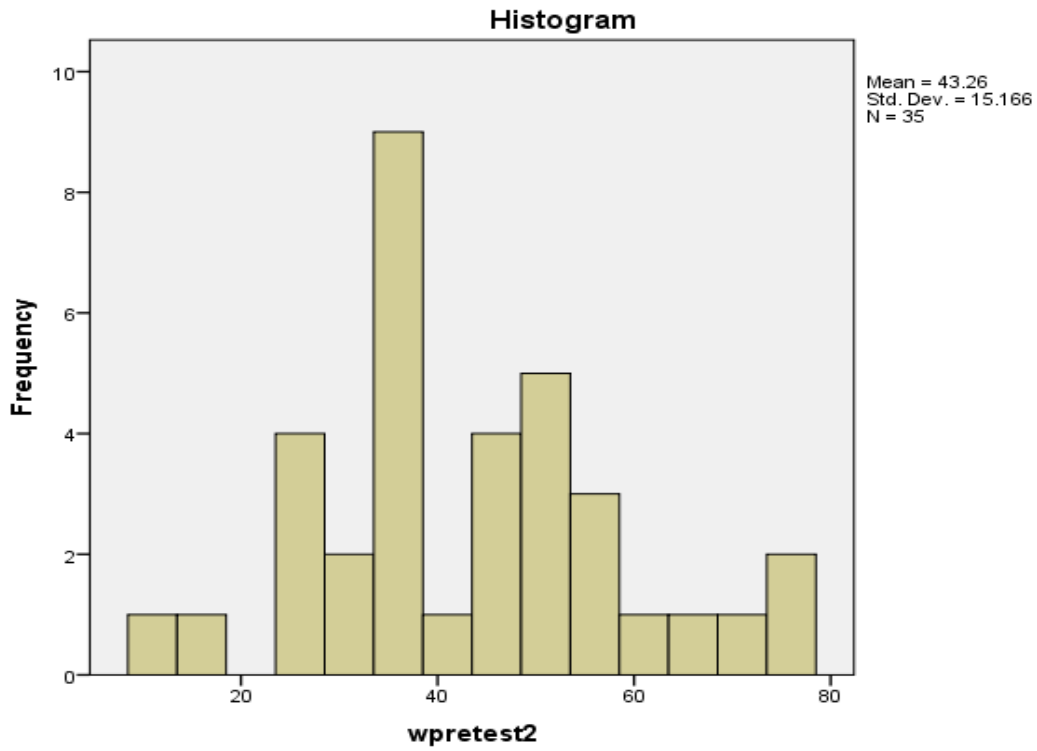
\*. This is a lower bound of the true significance.

## 5.2. Histogram and Normal Q-Q Plots Result

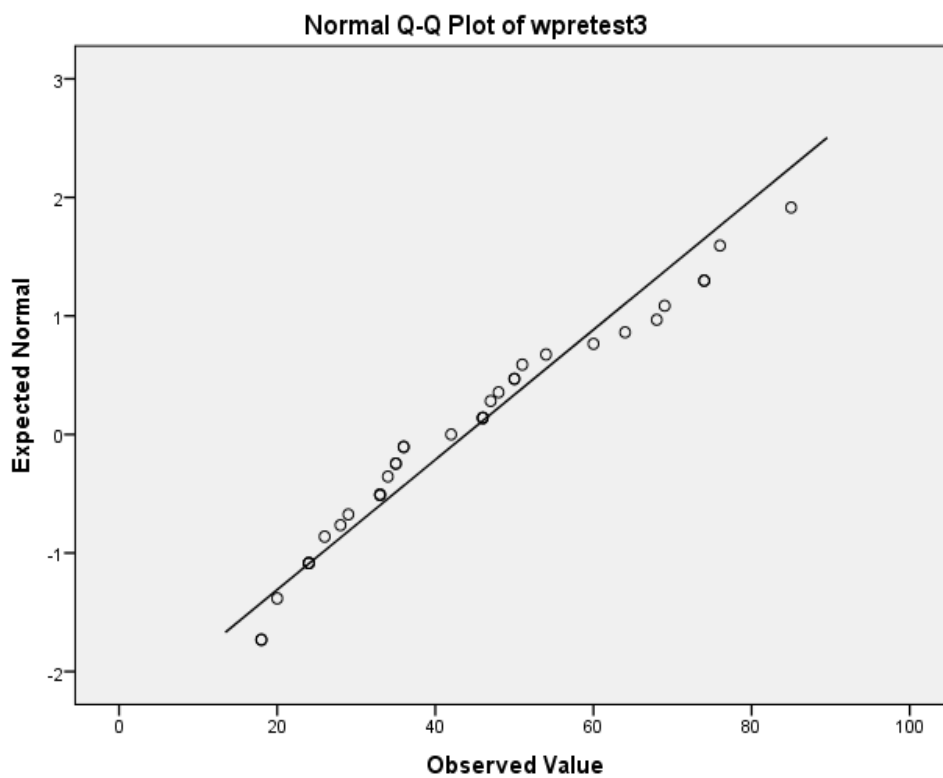
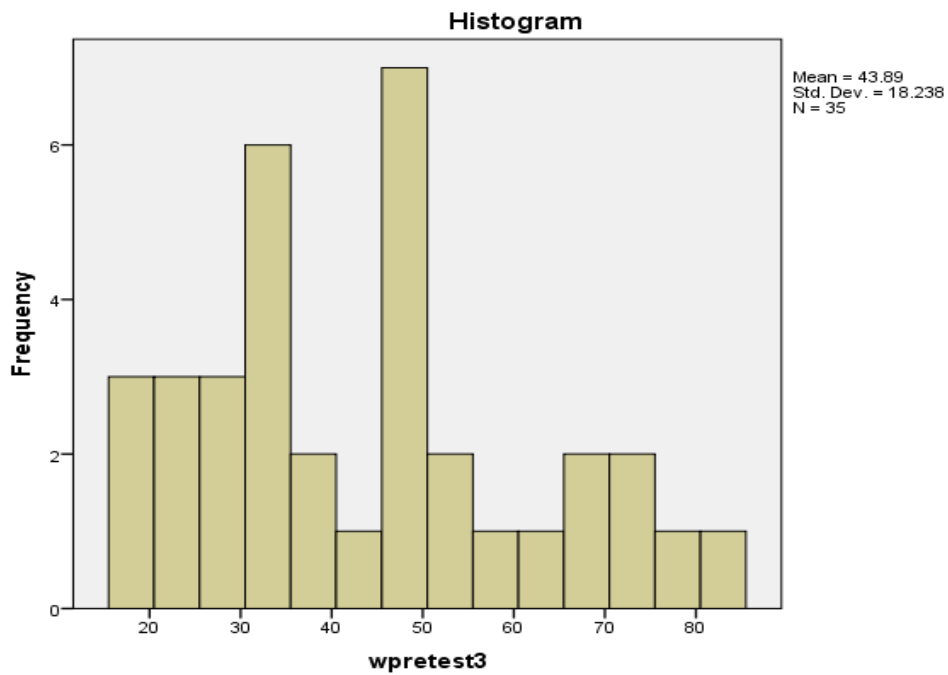
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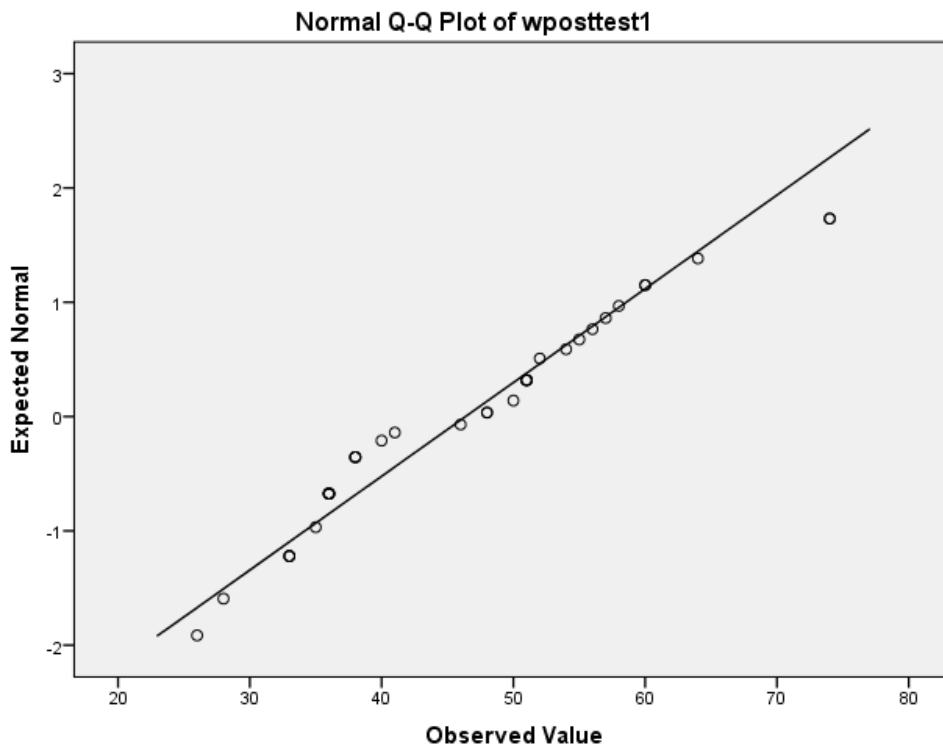
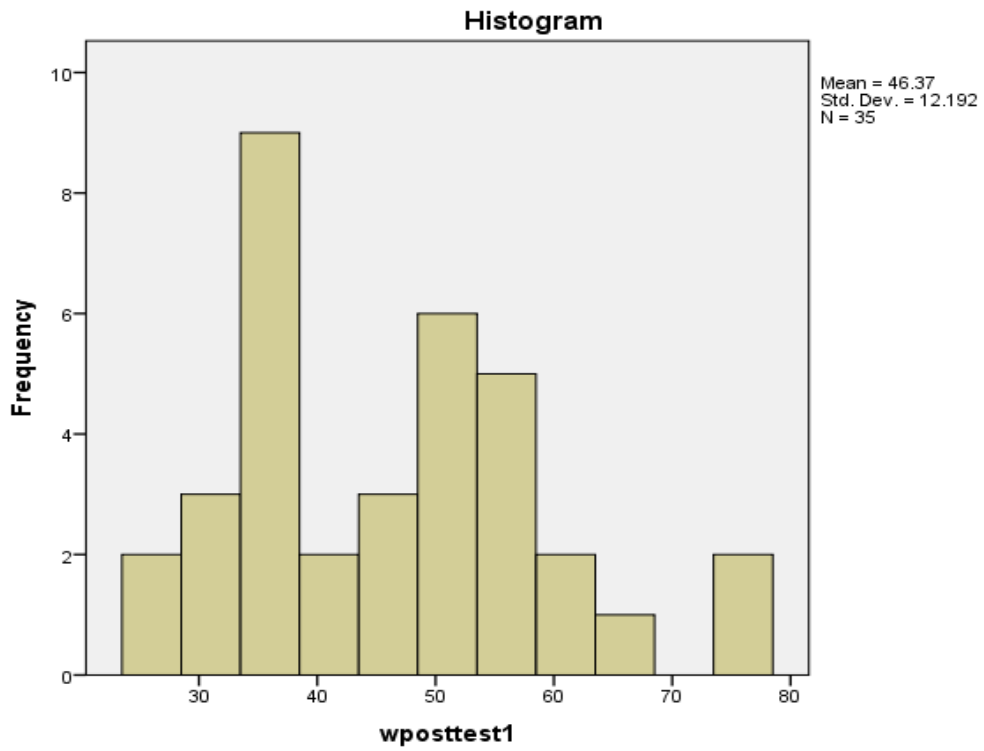
## Writing Performance Pre-test 2



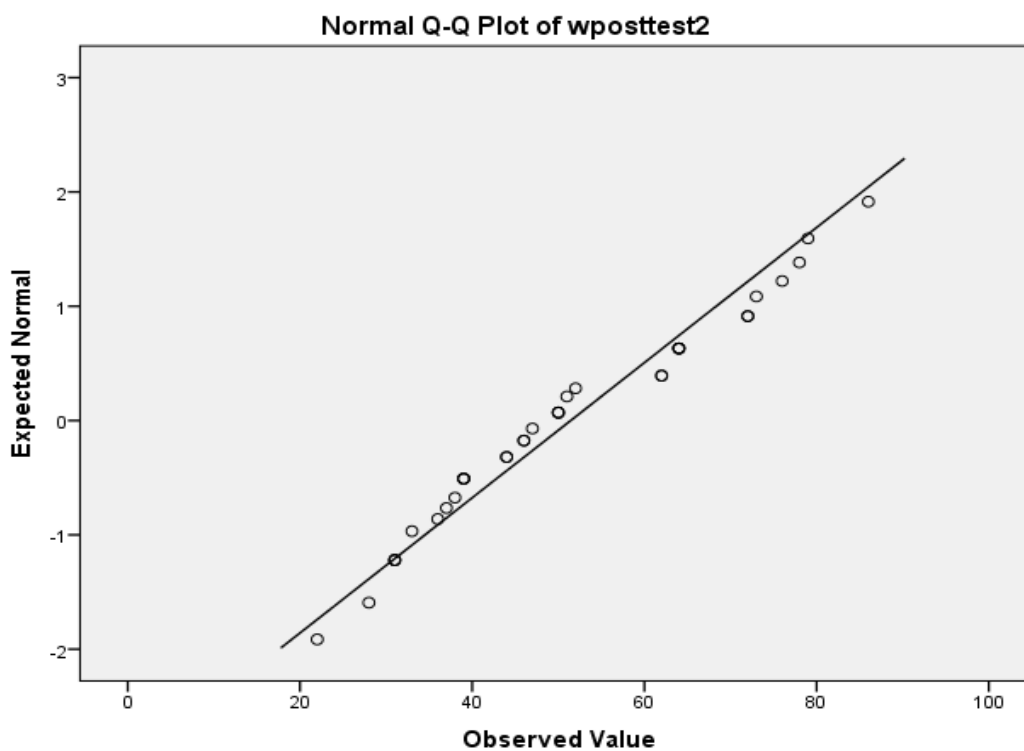
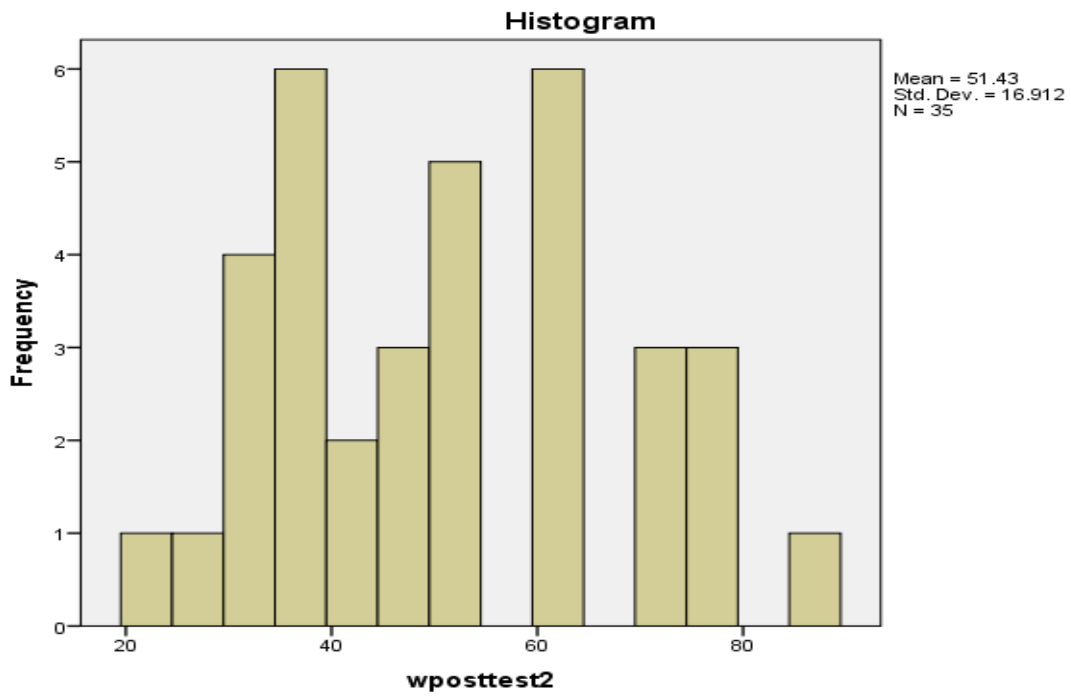
### Writing Performance Pre-test:3



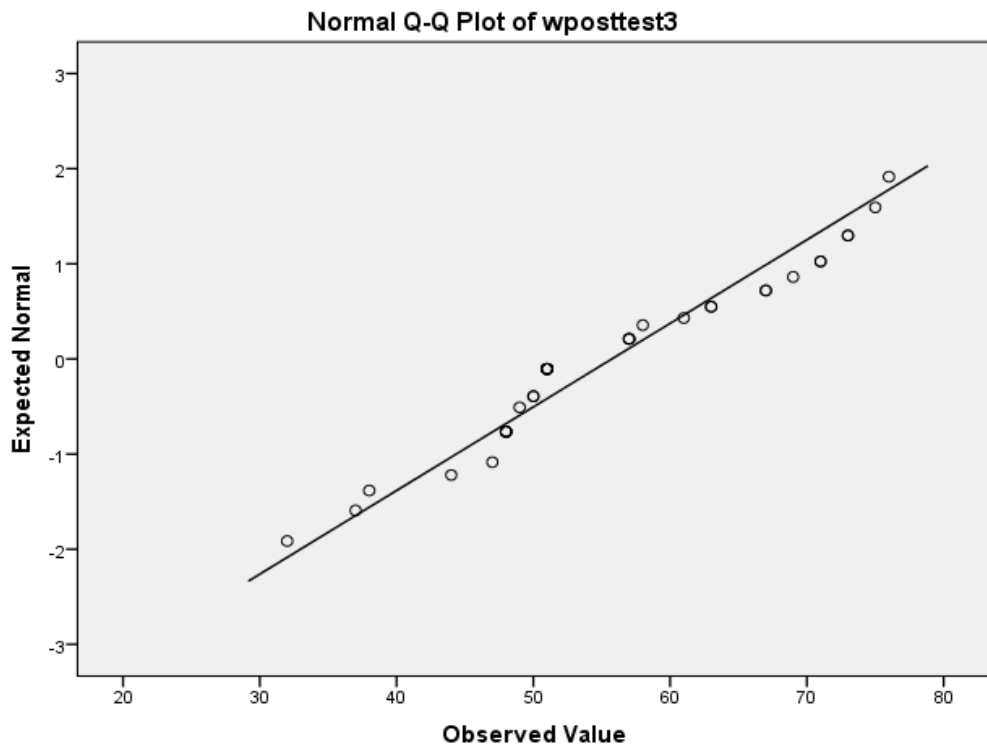
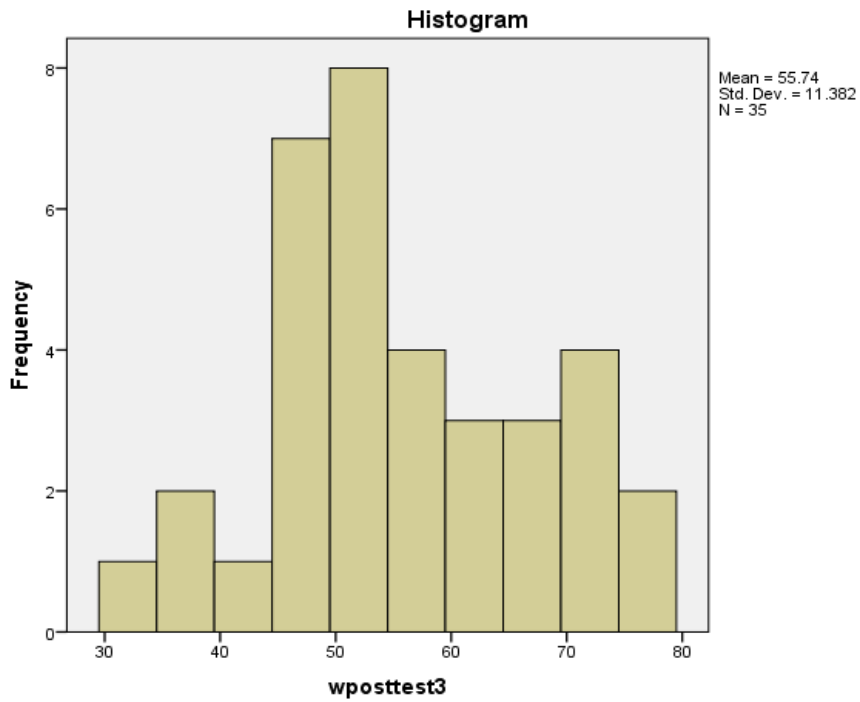
# Writing Performance Post-test 1



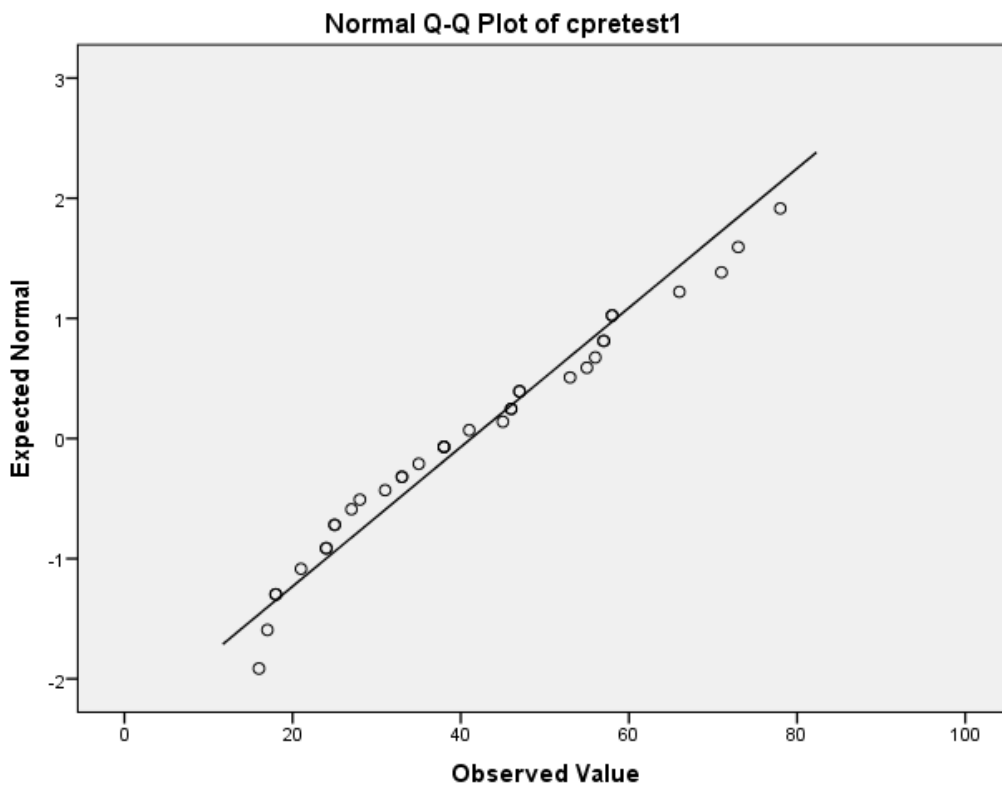
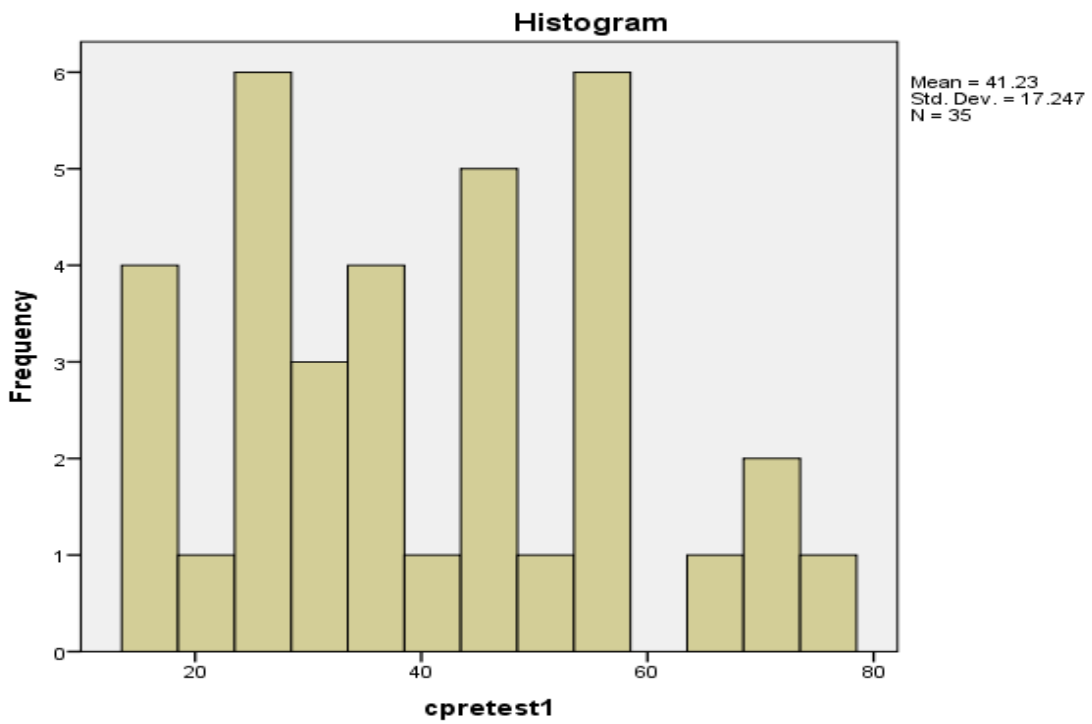
## Writing Performance Post-test 2



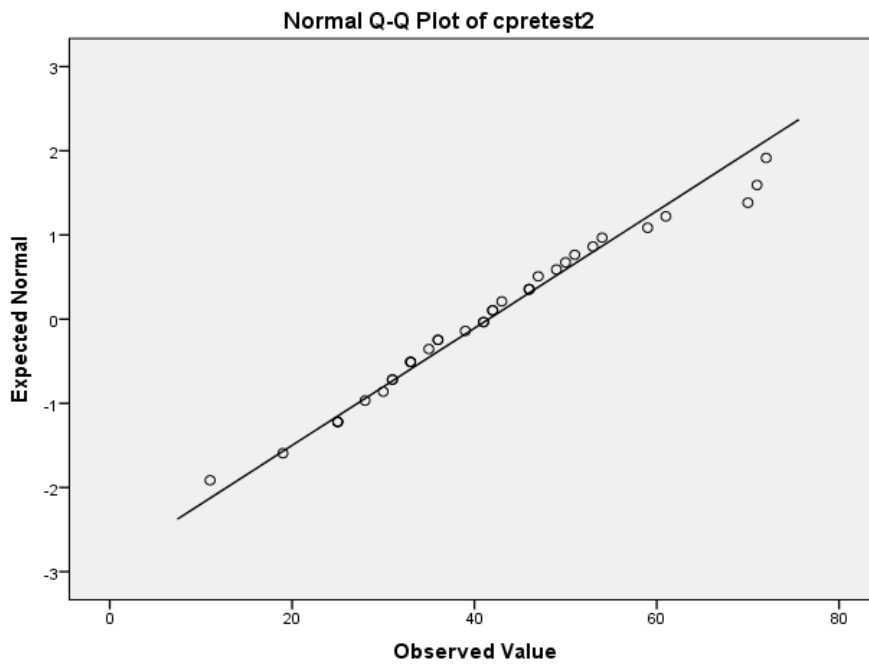
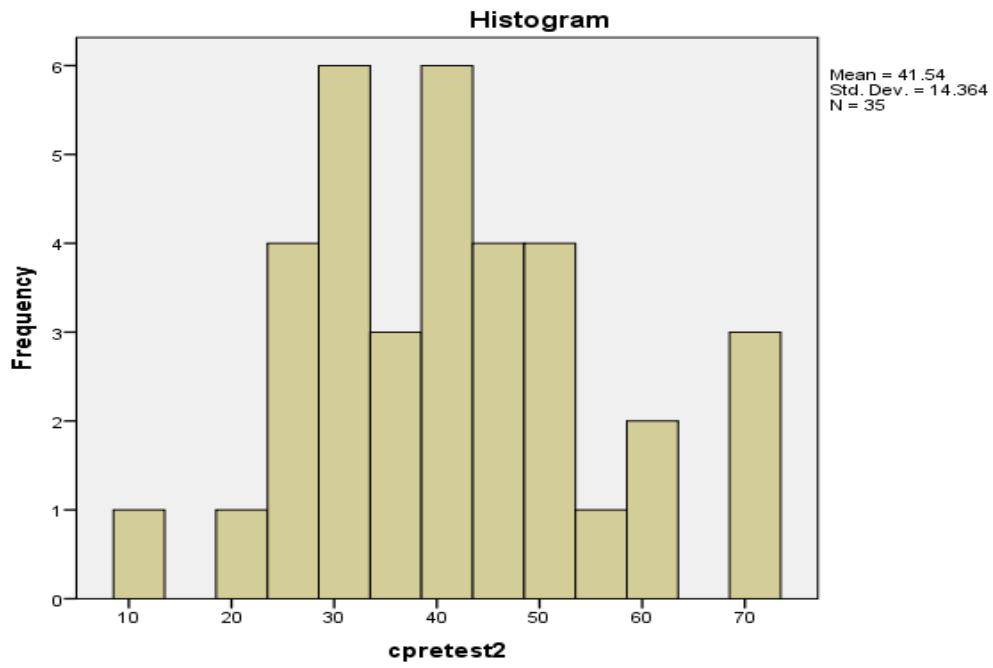
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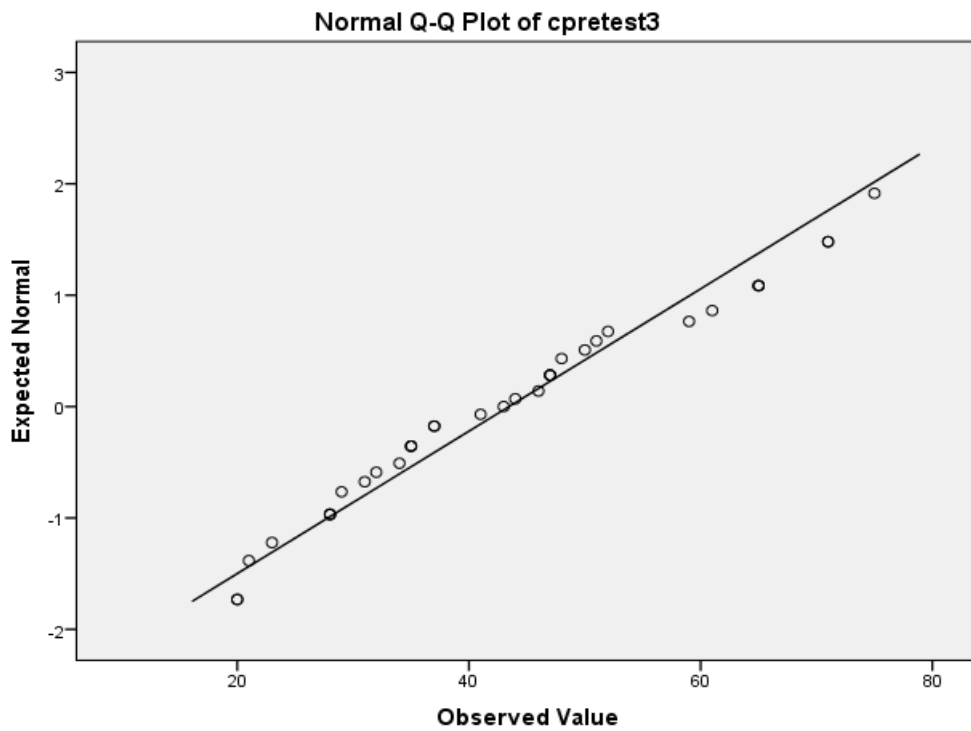
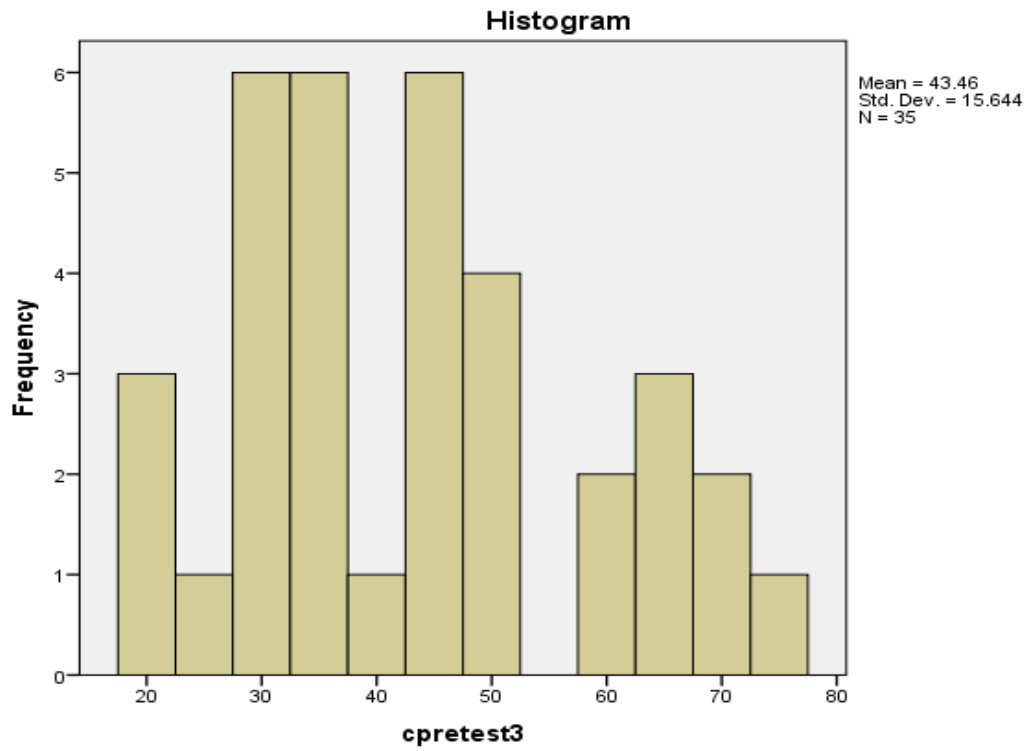
### Critical Thinking Skills Pre-test: 1



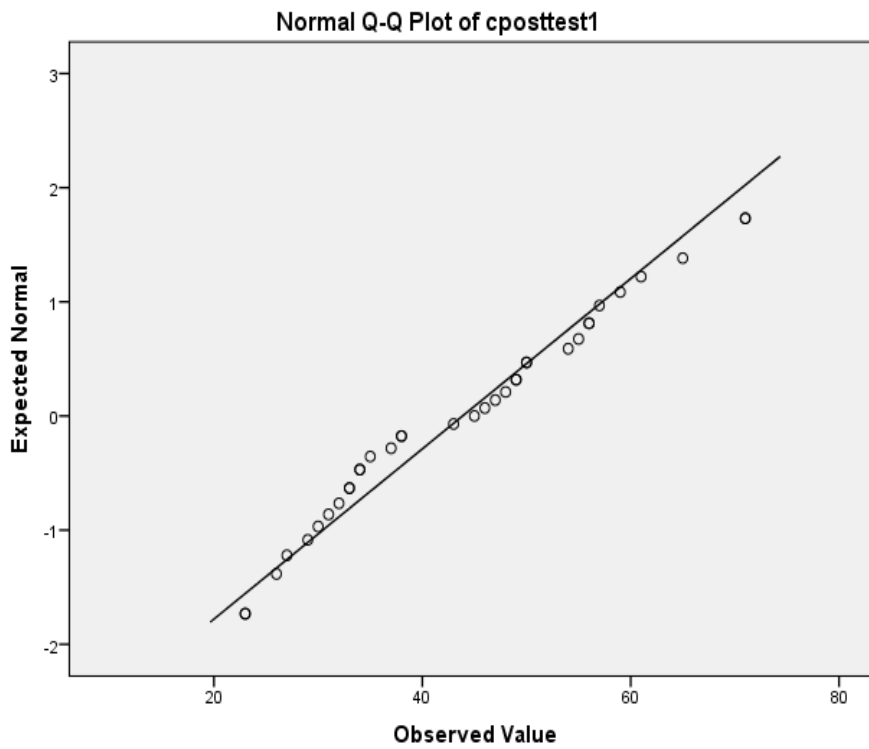
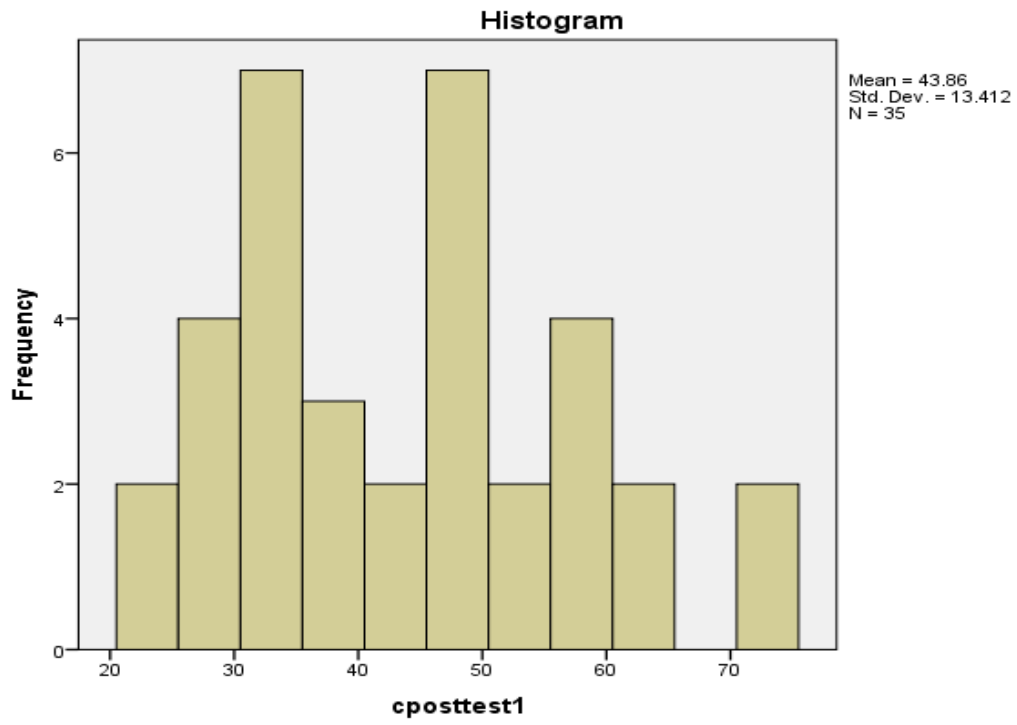
## Critical Thinking Skills Pre-test: 2



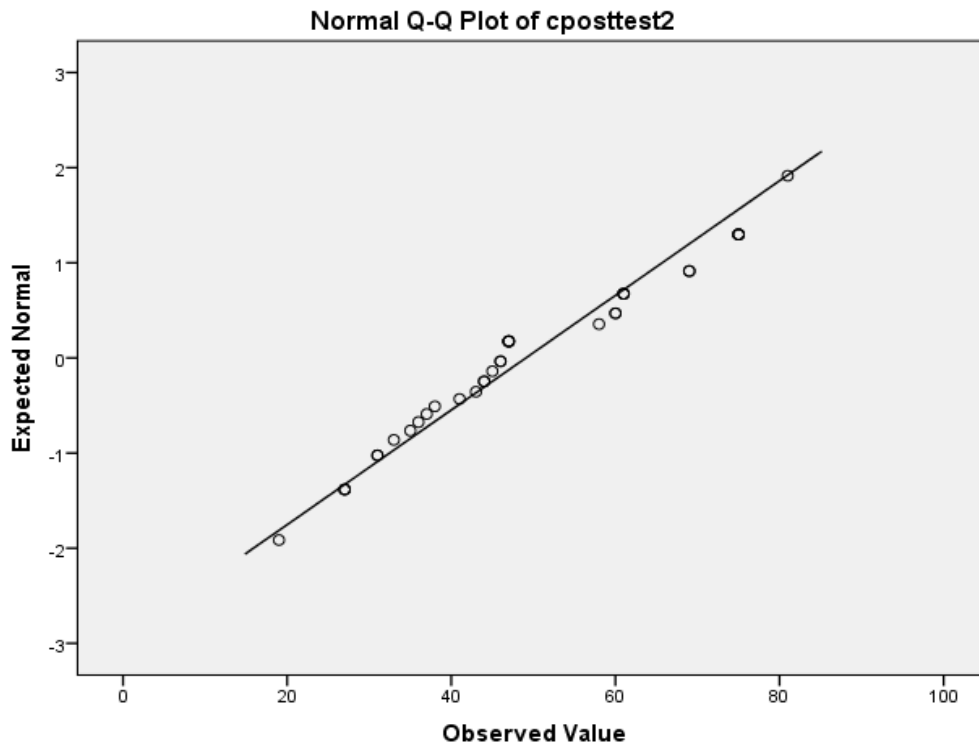
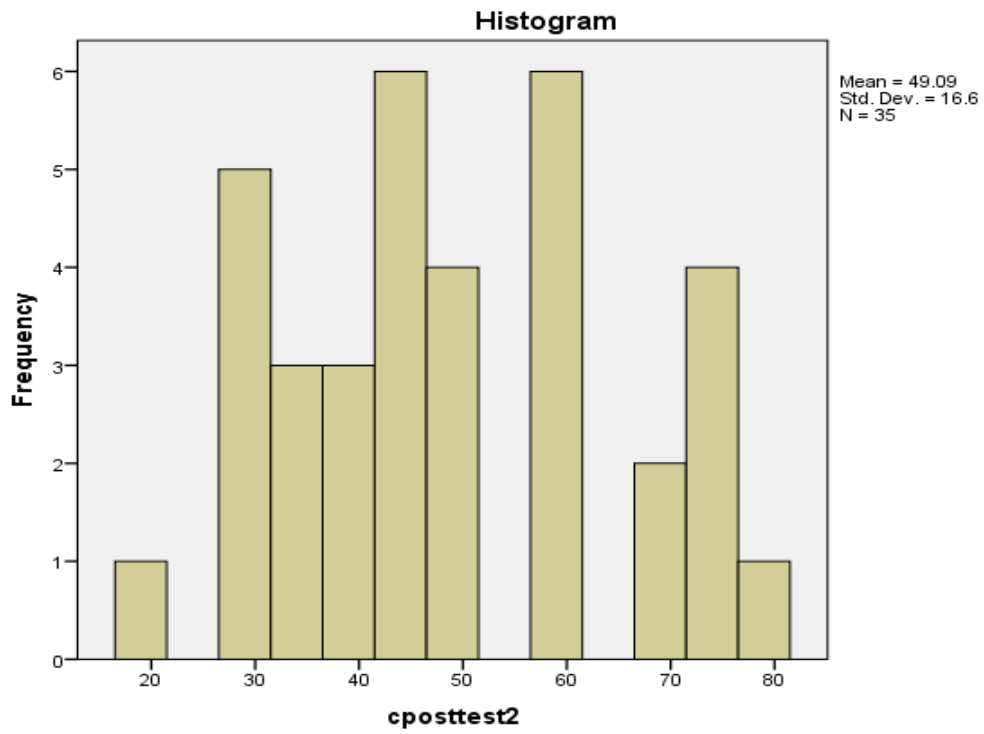
### Critical Thinking Skills Pre-test: 3



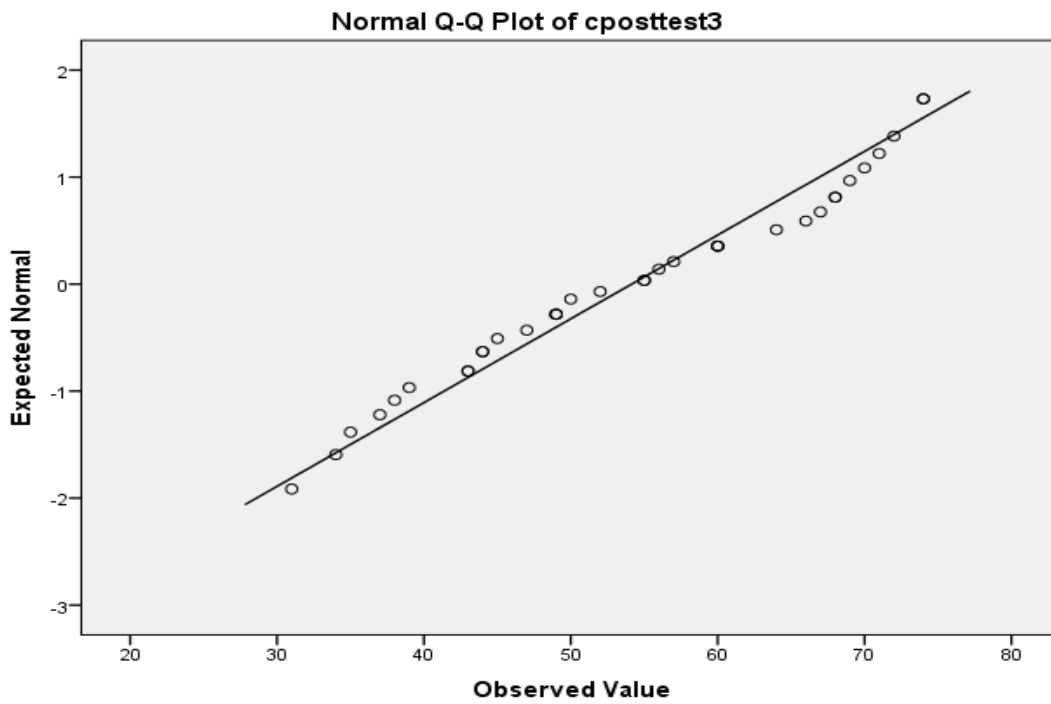
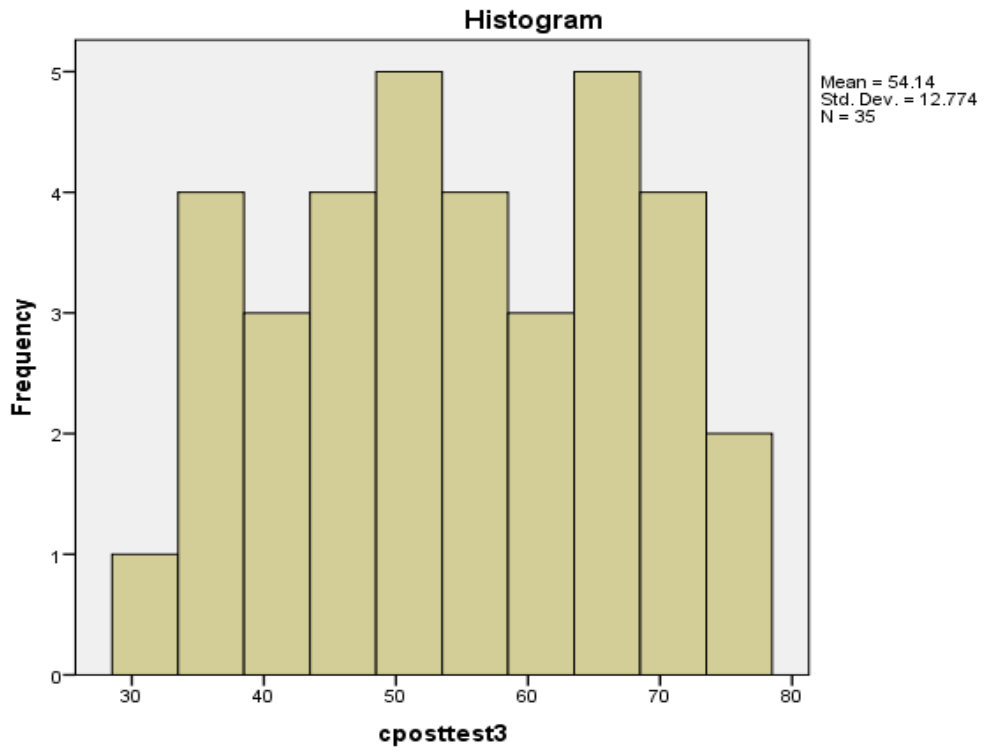
# Critical Thinking Skills Post-test: 1



## Critical Thinking Skills Post-test: 2



### Critical Thinking Skills Post-test:3

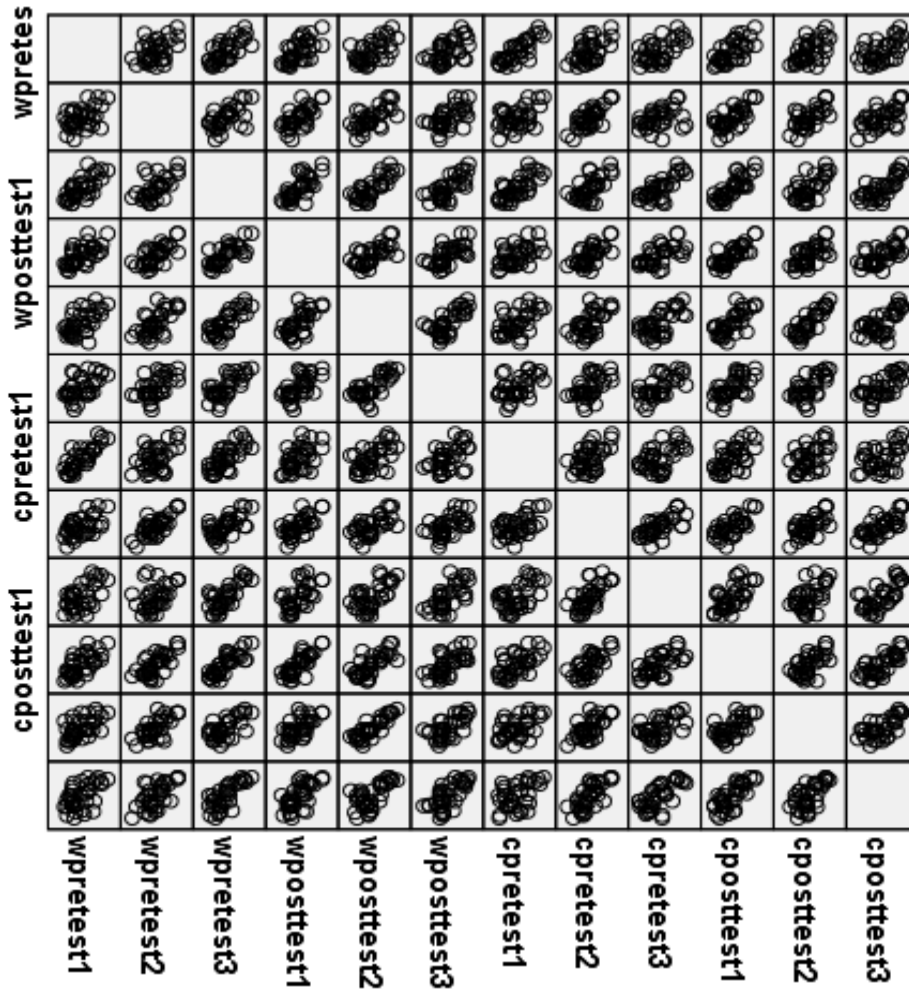


## **6. Linearity**

There should be a linear relationship between each pair of dependent variables for each related group of the independent variable. This assumption can be tested by plotting a scatterplot matrix for each related group of the independent variable. If there is a linear relationship, the graph (the dots) makes straight lines. If not the graph (dots) make either circular or any other shapes.

In this study, the graph (the dots) in the scatterplot matrix made straight lines which shows that there is a linear relationship between each pair of the dependent variables. Below the graph shows that the dependent variables have linear relationship

## Linear Relationship



### 7. Multicollinearity

There should be no multicollinearity. In this regard, the dependent variables need to be moderately correlated with each other. If the correlations are too high (generally considered greater than 0.9), there could be multicollinearity. The maximum cutoff point is 0.9 since Pearson's r value is greater than 0.9 though the cutoff point is debatable among researchers. The minimum cutoff point is 0.2 though it is also a debatable issue. Thus, the most used minimum and maximum cutoff points are 0.2 and 0.9 respectively. In this study, the correlation values of the dependent variables were from 0.6 to 0.8. It indicates that there was no multicollinearity, and the multicollinearity assumption was met.

## Multicollinearity

### Correlations

.448   .728   .648   .598   .523   .834   .536   .573   .685   .569   .548

.448   .594   .709   .663   .562   .445   .789   .432   .720   .699   .620

		wprete st1	wpretes t2	wpretest 3	wposttes t1	wposttes t2	wposttest 3	cpretest1	cpretest2	cpretest3	cposttes t1	cposttes t2	cposttest 3	
Wpretes t 1	Pearson Correlation	.7281	.594**	**	.750**	.810**	.737**	.740**	.656**	.775**	.842**	.661**	.763**	
	Sig. (2-tailed)		.007	.000	.000	.000	.001	.000	.001	.000	.000	.000	.001	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
Wpretes t 2	Pearson Correlation	.648**	.7091	.750**	**	.685**	.654**	.530**	.686**	.620**	.831**	.658**	.673**	
	Sig. (2-tailed)	.007		.000	.000	.000	.000	.007	.000	.009	.000	.000	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
Wpretes t 3	Pearson Correlation	.598**	.663**	.8101	.685**	**	.728**	.578**	.644**	.631**	.735**	.875**	.674**	
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
wpostte st1	Pearson Correlation	.523**	.562**	.737**	.6541	.728**	**	.472**	.550**	.671**	.662**	.667**	.676**	
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.001	.000	.000	.000	.000	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
Wpostte st 2	Pearson Correlation	.834**	.445**	.740**	.530**	.5781	.472**	**	.512**	.509**	.612**	.505**	.471**	
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
Wpostte st 3	Pearson Correlation	.536**	.789**	.656**	.686**	.644**	.5501	.512**	**	.694**	.725**	.685**	.728**	
	Sig. (2-tailed)	.001	.000	.000	.000	.000		.004	.001	.000	.000	.000	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
cpretest 1	Pearson Correlation	.573**	.432**	.775**	.620**	.631**	.671**	.5091	.694**	**	.649**	.547**	.689**	
	Sig. (2-tailed)	.000	.007	.000	.001	.000	.004		.002	.002	.000	.002	.004	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
cpretest 2	Pearson Correlation	.685**	.720**	.842**	.831**	.735**	.662**	.612**	.7251	.649**	**	.653**	.768**	
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.001	.002		.000	.000	.000	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
cpretest 3	Pearson Correlation	.569**	.699**	.661**	.658**	.875**	.667**	.505**	.685**	.5471	.653**	**	.652**	
	Sig. (2-tailed)	.000	.009	.000	.000	.000	.000	.002	.000		.000	.001	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
cposttes t1	Pearson Correlation	.548**	.620**	.763**	.673**	.674**	.676**	.471**	.728**	.689**	.7681	.652**	**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
**. Corre Cpostte st 2	Correlations Correlation	Correlations significant at the 0.01 level (2-tailed).				**	**	**	**	**	**	**	1	**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.002	.000	.001	.000		.000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	
Cpostte st 3	Pearson Correlation	**	**	**	**	**	**	**	**	**	**	**	1	
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000	.004	.000	.000	.000	.000		
	N	35	35	35	35	35	35	35	35	35	35	35	35	

The above correlation table shows the multicollinearity of the dependent variables. From the table, the correlation values are between 0.448 and 0.842. The acceptable correlation value is between 0.2 and 0.9. Thus, it can be understood that there was no multicollinearity, and the assumption is met.

## Appendix–S: Assumptions of Paired Samples t-test

Before conducting the paired-samples t-test analysis, the assumption of normally distributed difference scores was examined. Accordingly, skew and kurtosis, normality test, and histogram, and normal Q-Q plots were checked out. The descriptive statistics result shows that the paired samples t-test assumptions were met. The following table presents the skew and kurtosis levels.

Difference		Statistic	Std. Error
Self-efficacy Pre-test and Post-test	Skewness	-.675	.398
	Kurtosis	.085	.778
Goal Orientation Pre-test and Post-test	Skewness	-.656	.398
	Kurtosis	1.236	.778
Belief about Writing Pre-test and Post-test	Skewness	-.188	.398
	Kurtosis	-.345	.778
Affect about Writing Pre-test and Post-test	Skewness	.029	.398
	Kurtosis	.940	.778

The skew and kurtosis levels were estimated as (self-efficacy, -.675 and .085; goal orientation, -.656 and 1.236; belief about writing, -1.88 and -.345, and affect about writing, .029 and .940), respectively. The normality assumption was considered satisfied since the results were less than the maximum allowable values for a t-test (i.e., skew < 2.0 and kurtosis < 9.0; Posten,1984).

Besides, as it can be seen in the following table, the normality test result, especially, the Shapiro-Wilk test result *p*-values of each motivation aspect (self-efficacy, .093; goal orientation, .093; belief about writing, .558, and affect about writing, .285) are insignificant ( $P > .05$ ) which indicate the assumption of normality has been met.

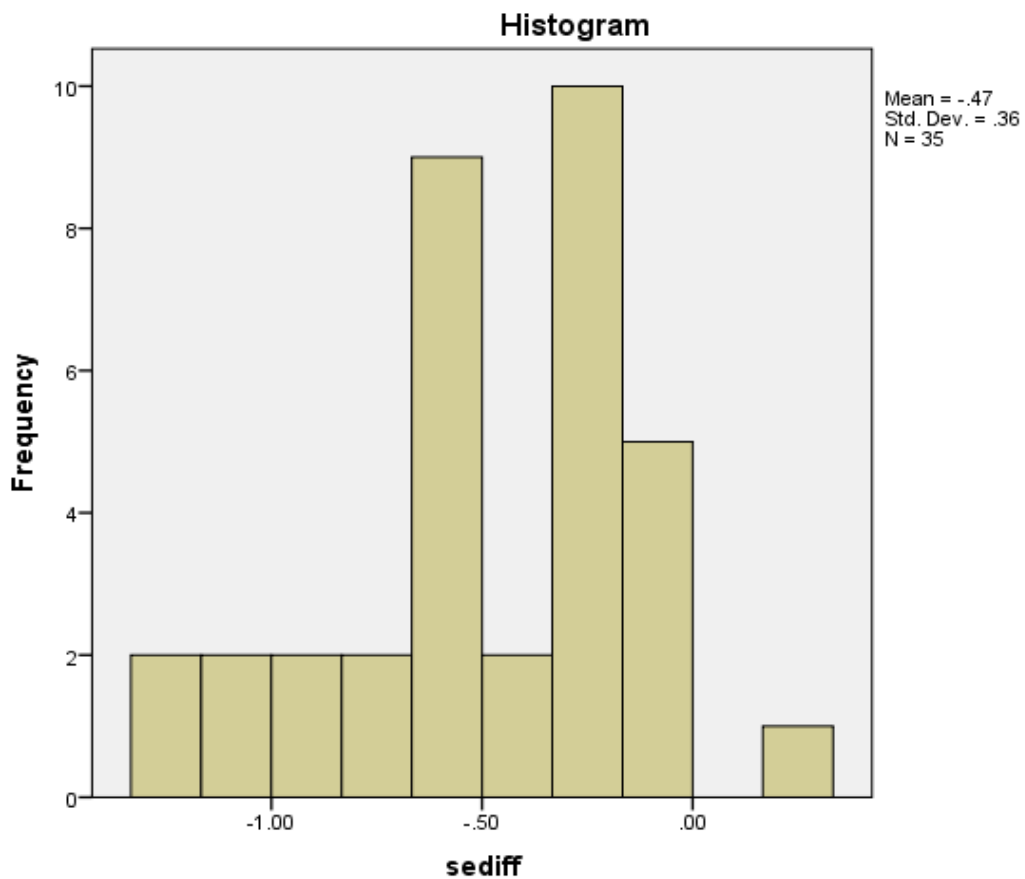
**Tests of Normality**

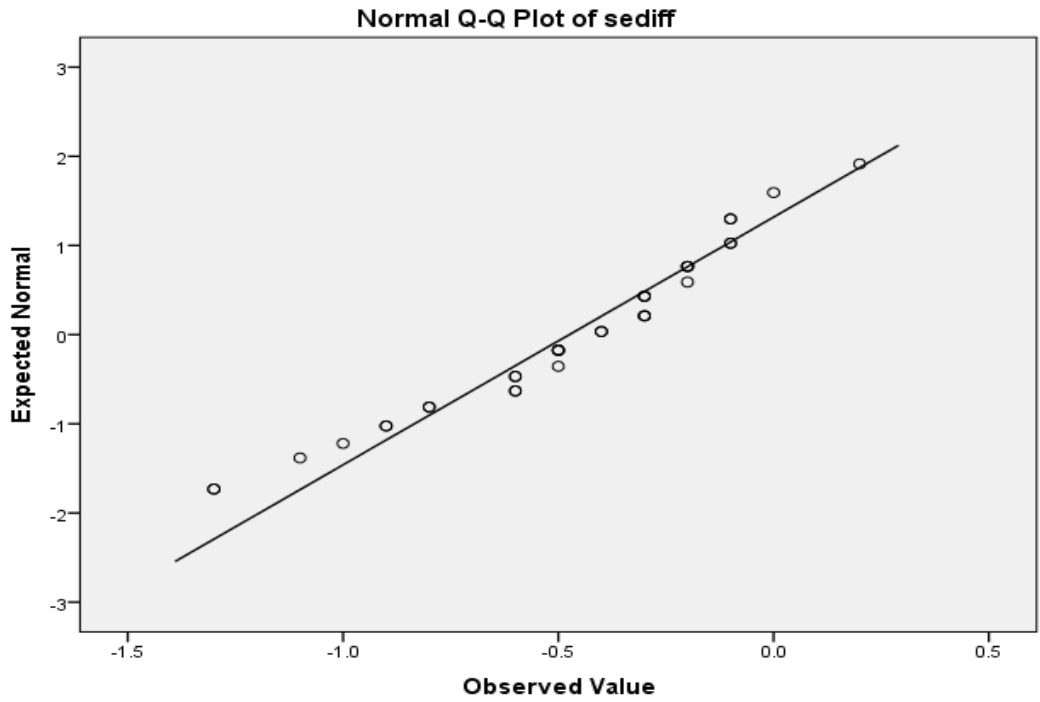
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Self-efficacy difference	.143	35	.068	.947	35	.093
Goal orientation difference	.145	35	.061	.947	35	.093
Belief difference	.130	35	.140	.974	35	.558
Affective difference	.181	35	.005	.963	35	.285

a. Lilliefors Significance Correction

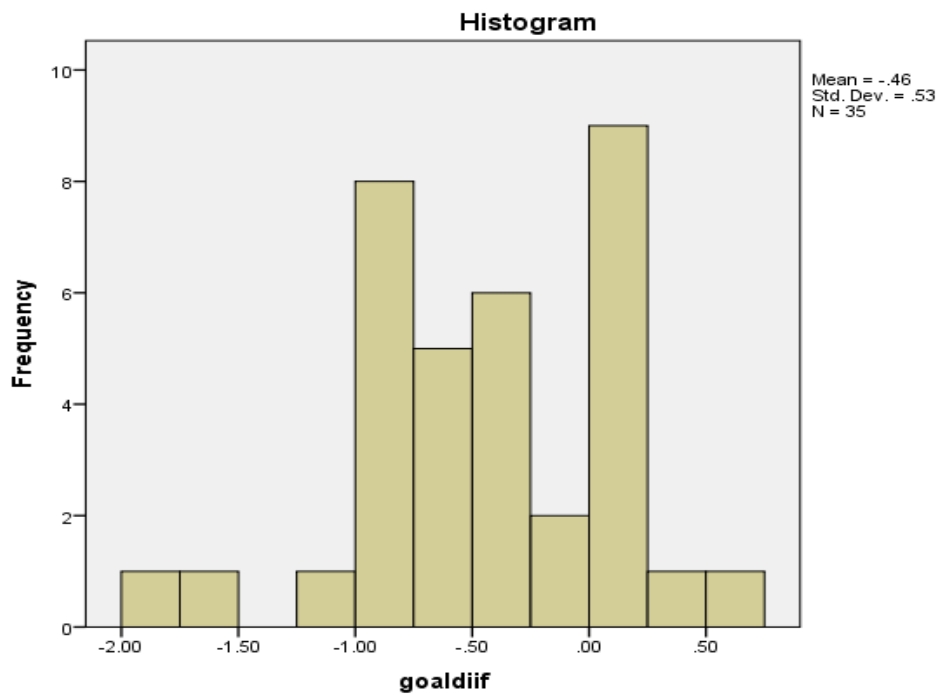
Besides, the histogram and the normal Q-Q plots also confirmed the normality of the data. These results are presented below:

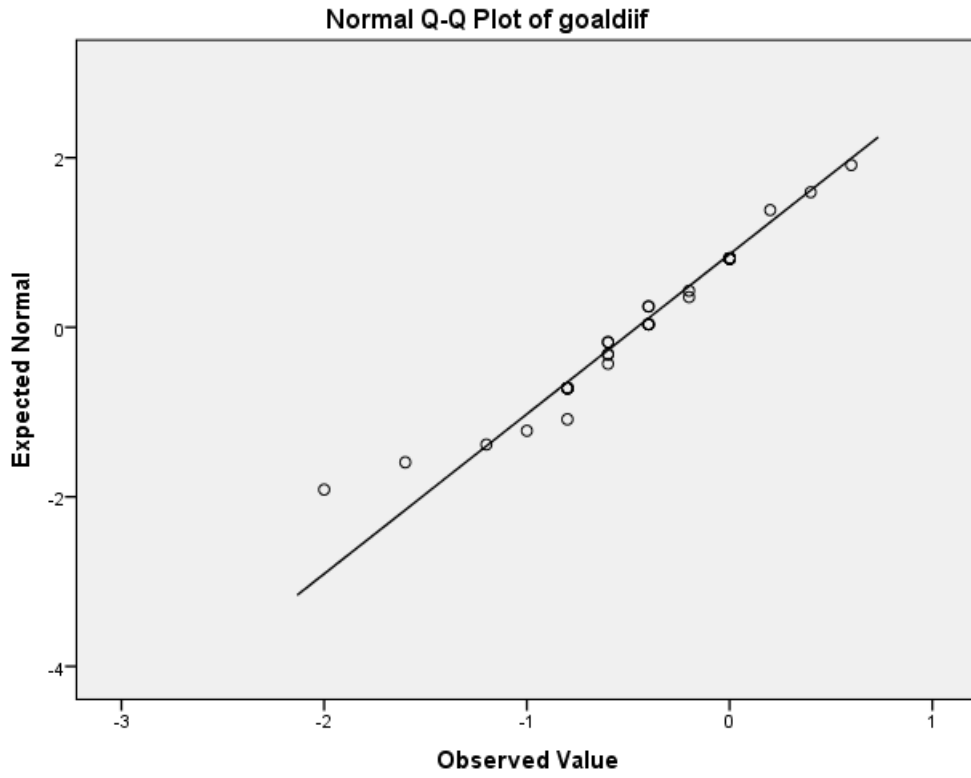
**DIFFERENCE: Self-efficacy: Pre-test - Post-test**



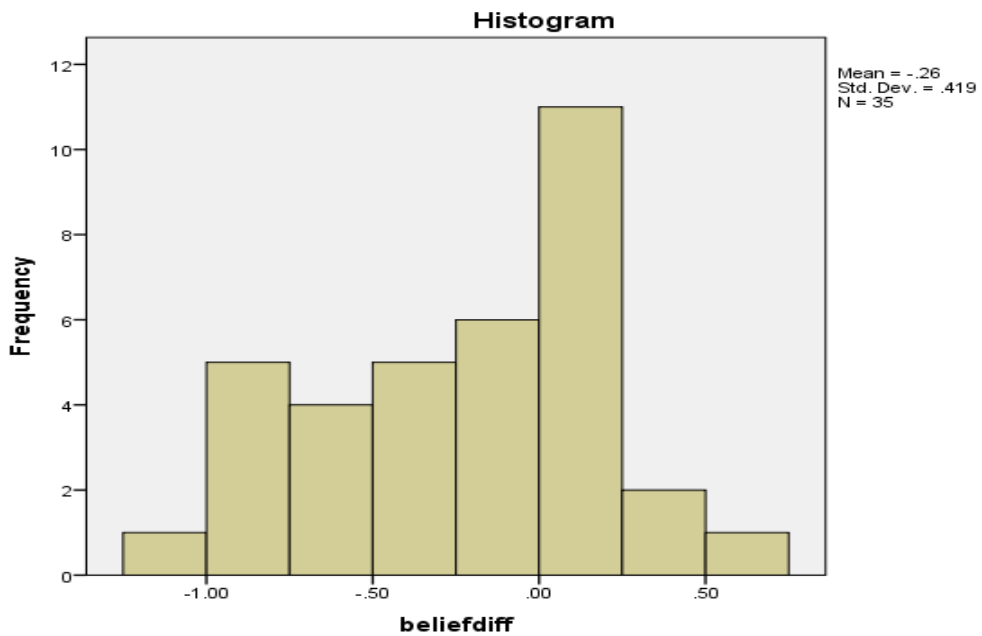


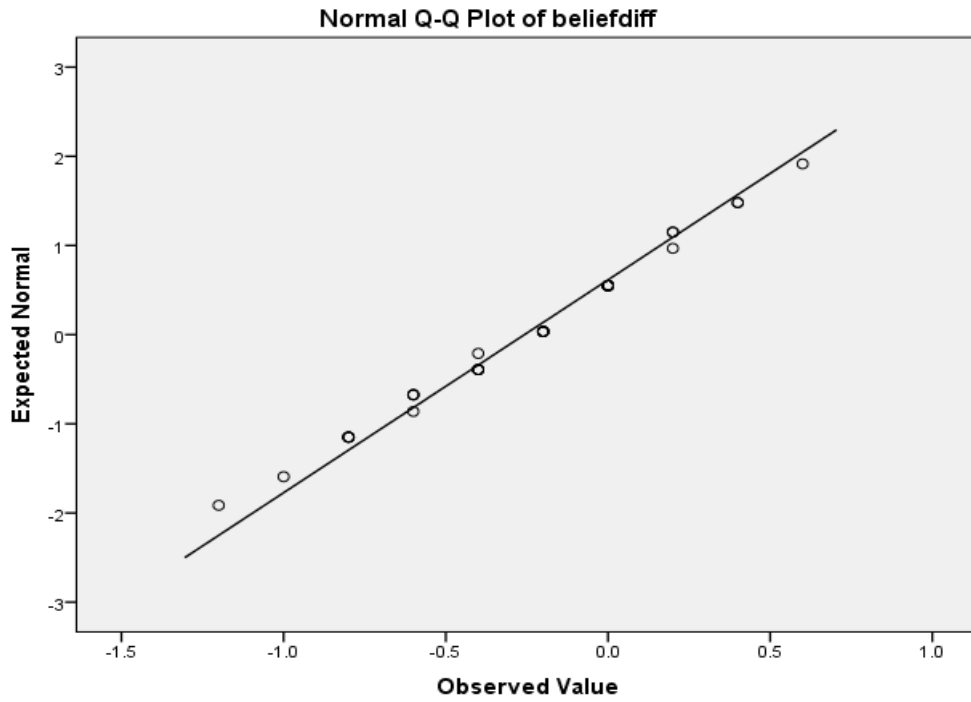
**DIFFERENCE: Goal Orientation: Pre-test Post-test**



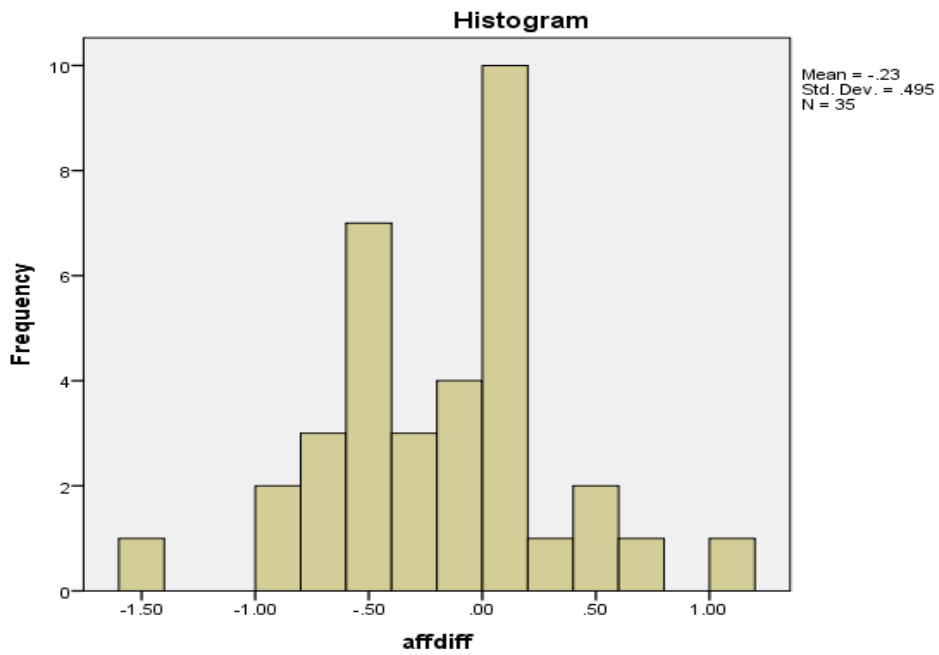


**DIFFERENCE: Belief about Writing: Pre-test Post-test**

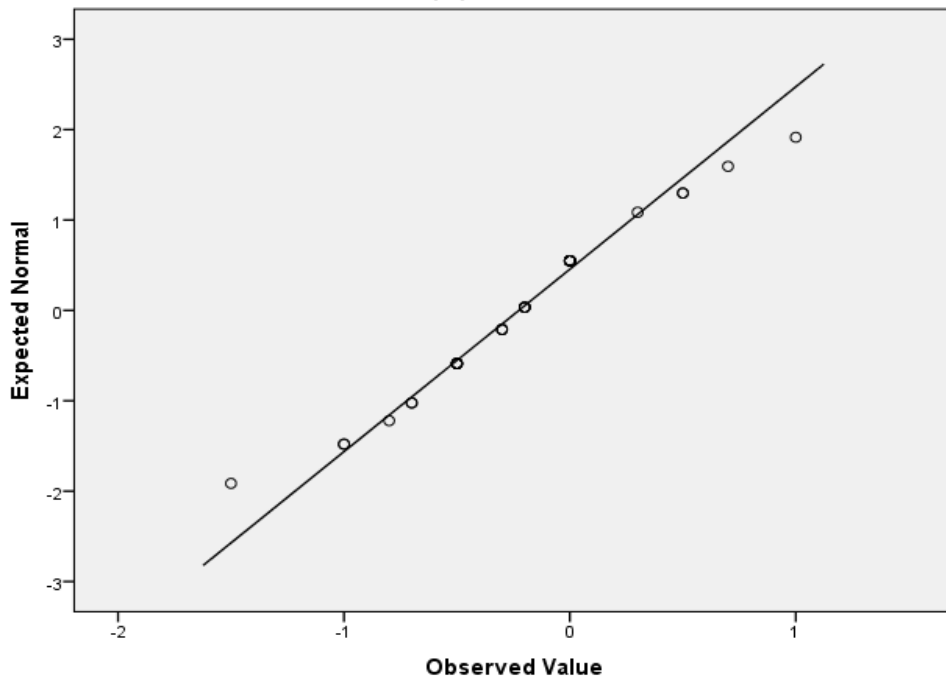




**DIFFERENCE: Affect about Writing: Pre-test Post-test**



Normal Q-Q Plot of affdiff



Pre-test-2 Essay of Student 14

WP

Pre-test-2 Essay of Student 14

There are some people who believe that female's genital circumcision should be constitutionally supported and executed to produce well-disciplined generation, this idea is not not acceptable because, it is harmful tradition as well. as it affect on the well-fare of female. In this introduction I want to reflect female's genital circumcision should be constitutionally impossible to support due to some reasons like at pregnancy, on health, and etc.

I am strongly disagree, female's genital circumcision ~~should be~~ is a bad idea in our country. Because female's genital circumcision has an impact on female health, mistreating with husbands, and breaking household equipments are impossible to support this assumption. Because this idea is unacceptable by community and health care. It is a bad culture, and damaged our economy, parents as well as female itself. According to health care female's genital circumcision is not good idea. as a result when female's happen misaction female's may happen different problem on your own health.

In General, female's genital circumcision is not an acceptable assumption in our country. Because it has many problems on female's well-being, especially at the pregnancy, at child birth the blood excessive out. It is also a bad as well as an harmful on female's health.

## Post-test-1 Essay of Student 14

WP

Post-test-1 Essay of student 14

Universities should control their students' way of life.

Some people avoid that at university level controlling the students is not ~~sure~~ good since the students are enough for themselves, and they know bad or good things. However, I don't agree with his ideas, because if they got excess freedom they can't control themselves. As a result, they may be imposed to unwanted pregnancy, drug abuse and academic failure. Therefore, universities should control their students way of life.

If universities don't not take care the students, they will impose to unwanted pregnancy, they observe their friends and they continue to do ~~what~~ what their friends did, because they judge everything as fashion, and the students want to be free. But in order to achieve a good results the students must be controlled unless they forget their goal.

In university, no one live with his/her family, so universities must take care to ~~the~~ their students, unless they imposed to drug abuse. If they addicted once, they can't leave it. As a result, they lost their mind, they damaged psychologically, after that they discharge from their academic learning.

1/2

WP

## Post-test-1 Essay of Student 14

When students get excess freed in the campus, they may not control themselves, they ~~will~~ <sup>do</sup> not attend class, they ~~will~~ <sup>do</sup> not achieve a good result then finally, they ~~will~~ fail in achieving their academic goal. So universities should control the students.

General, I argue that universities should control their students carefully, because they engaged in harmful ~~new~~ practices including HIV/AIDS carrier, they don't achieve their goal. So universities have ~~the~~ great responsibility to control their student way of life at all.

2/2

(XIP) Pre-test-3 Essay of Student 22

Many people believe that facebook is the best social media, because of it enables individuals world wide to communicate each other. But I don't agree with ~~use~~ their idea due to several reasons.

The first reason is, it exposes individuals to have a fake relationship with a person they don't know ~~well~~ well. As a result, they become hurt psychologically when they ~~can~~ know the reality about them.

The other reason, it affects one's culture negatively. Because, people who highly depend on what they see and hear in the facebook, casily abandon and ignore their own endogenous culture. They only ~~act~~ act what they see and hear. Consequently, they may exposed to identity crisis.

||

(WP) Post-test-2 Essay of Student 22

People argue that women's affirmative action should stop simply looking their enjoyment in very civilized countries. However, I strongly disagree with their ideas. As to me, first knowing the need for women's affirmative action is basic before suggesting a decision to stop it. Because there are many reasons for women's affirmative action.

The first reason is historical inequality since women have been marginalized and denied in many areas, it seek to rectify this historical injustices and create a more equitable society.

The second reason is economic empowerment, because promoting women's participation in the workforce can leads to economic growth due to more than 50% of the society are women, particularly in our country.

The third reason is social justice, and the other basic reason is social justice, because ensuring that women have equal access to opportunities is a matter of fairness and justice. Affirmative action can help level the playing field and promote social equity.

Overall, ensuring women's affirmative action is very important in creating a more equitable society for women and underserving the broader benefits.

1/2

(WP) Post-test-2 Essay of Student 22

Therefore, concerned bodies should aggressively work  
s strengthening policies which favour the women's rights  
in every aspects.

CTV

Pre-test-1 Essay of Student 26

pre-test 1.

Having sexual is not fair for university students

• Having sexual friendship ~~has~~ danger or unimportant things for all over university students without discrimination. ~~people~~ <sup>people</sup> that have sexual friendship are different from other students by having little Grade result (GPA). If one person follows girls ~~for~~ <sup>he</sup> forget his vision or his objective. he is not achieve his goal like wise. he is not successful.

Having sexual friendship <sup>at university level</sup> is indirectly leads <sup>to</sup> sexual transmitted disease (STD) like HIV, AIDS, Chancroid, and etc. People that have sexual friendships are like people without saving ~~time~~ <sup>time</sup> properly. If ~~they~~ follow the sexual ~~relationship~~ relationship it leads to different problems. Like the ability to think in general is decline or it is become very minimum or small. In addition, ~~people~~ people that have sexual friendship is usually go to bed for sexual intercourse. For this reason, the income of his family may be destroyed or damage, his body may be weight loss, the ability to think become low.

Generally, having sexual friend relationship is not good for university students in general. rather it is bad habit. for this reasons, students at the university level should not follow such action rather he should follow his lecture or education because his <sup>purpose</sup> ~~purpose~~ is to gain new knowledge.

Post-test-3 Essay of Student 26 1/2

ETS

Government should not allow all university students to learn in the department they prefer without pre-condition.

Many people argue that government should allow all university students to learn in the department they <sup>prefer</sup> because this leads them to succeed most in that department and fruitful for themselves and their country. However, I disagree with this idea because if this is possible to all university the choice of students can't be balanced. This leads many students study few departments and other departments may be closed, as the department closed is use for country also it shouldn't be possible to allow students to enter the department they prefer.

The first reason why I say government shouldn't allow students to learn in the department they prefer is many students may prefer few departments. This may lead the job opportunity with that language may be compacted. It means, after students graduate, they start to find a job but it is not easy for all <sup>these</sup> students to get a job. Because, unbalance situation happen between the number of workers the employer organization need and the number of graduate students ~~is~~ from that department.

The another reason why I say government shouldn't allow students to learn in the department they prefer as many students prefer few departments, the other department may be closed. So this results in the country.

all  
minutes  
(C.T.S)

### Post-test #3 Essay of Student 26

Can't get the benefit she get from this closed department, because the unchosen departments are first formed for purpose give advantage to the country.

Generally, for all these reason government should not allow student to learn in the department they prefer. It should be given based on their point they scored on fresh man course.

2/

CS  
Pre-test-1 Essay of student 9

I fully agree with people who believe having ~~sex~~ sexual friendship is not good for student at university level. Because, attending higher education is not an easy task. It requires focus and adapting oneself to all the situations which happen there independently with the help of our parents.

In making focus to their education, many students are seen decrease in their academic result when they have a sexual friend at university. Because, these students give more emphasis for their relationship over their education. As a result, such students will not be successful in their education and future life as well.

The other thing is, the university context is not appropriate to have sexual friendship besides attending higher education. For example, if unwanted pregnancy occurs, it'll be difficult for students to properly attend their education through overcoming the problem.

Generally, having sexual friendship must be forbidden for university students since it has many negative impacts not only on the students' education but also their life at all.

111

10

① Post-test-2 Essay of Student 9

There are some ~~people~~ people who believe "universities should control their students way of life". Their reason behind focus on students who score low in their academic achievement due to spending most of their time at clubs, entertainment, chewing ~~ch~~, smoking cigarette, drinking alcohol, joking with friends and among others. However, I disagree with their ideas due to various reasons.

The first and basic reason ~~is~~ reason is controlling is not the best mechanism to shape youngster's life and behaviour at this level. Research has consistently highlighted the importance of discussing, showing the way and helping them to understand their weakness and strength technically instead controlling them in shaping their behaviour.

The other reason is that result of controlling individuals life mostly end with negative consequences. For example, children who were grown by conservative parents have low confidence in doing things by themselves. Moreover, they may be exposed to various difficulties when they join university where is far from their parents living area. During this time, negative peer pressure can easily lead them to involve in unwanted behaviour because their parents didn't freely teach and show about every thing except controlling them before they join to university.

1/2

CTs

Post-test-test-2 Essay of Student 9

In sum, controlling students' way of life is not a feasible way to shape students' behaviour at university level. Rather I would advice providing sustained livelihood and reproductive health education in developing positive and acceptable behaviour among students. Hence, ~~the~~ basic change have brought through the persons' willingness inside instead of forcing them to do.

2/2

## Declaration

This is to certify that this dissertation titled “Effects of Academic Web-based Projects on EFL students’ Writing Performance, Critical Thinking Skills, and Writing Motivation” submitted in partial fulfillment of the requirements for the degree of doctor of philosophy in Teaching English as Foreign Language in the département of English language and literature, Faculty of Humanities, Bahir Dar university, is a record of original work carried out by me has never been submitted to this or any other institution to get any other degree or certificate. The assistance and help that I received during the course of this investigation have been duly acknowledged.

<u>Tseganesh Yirga</u>	<u>29/04/2025</u>	<u>Bahir Dar</u>
Name of the Candidate	Date	Place