

## EFFECTIVENESS OF USING CALL FOR TEACHING WRITING

by

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### Abstract:

*Development of the networking system today give some possibilities for students' learning language through CALL. Although there is a great benefit of computer assisted language learning on student's language proficiency in fact, there are still more schools and universities with inadequate facilities of computer and laboratory to learn. The study used quantitative-qualitative data to investigate the effectiveness of CALL. Approach implemented in this research was experimental one group pre- post-test design. The total population of this study was 157 of the Health Department students in University of 'Ayisyiah Yogyakarta of academic year 2019/2020 who took English for Daily Usage taken by using Simple random sampling. Data was collected by student's pre and post-test and the interviewing process. Data was analyzed by using SPSS version 21. Pre- and post-test tests' results were used to measure student's writing proficiency. This study serves other evidence toward how effective of using e-learning in our local teaching and learning environment supported by student's higher proficiency score of their writing post-test. Approach applied and showed in <https://unisayogya.learnsocial.online/> would overcome some disadvantages of traditional method of writing to some aspects by providing feedback, self-correction on students' mistakes or errors.*

**Keywords:** CALL, Writing, EFL, English Language Teaching, Hybrid

### INTRODUCTION

Writing is one of the hardest skills on English, while it is required to be taught from secondary level to university level. Hence, in delivering the materials, our teacher needs to have appropriate method to make students enthusiastic and motivated in learning (Turmudi, 2017). Online media has a significant effect on students in studying English. Teacher usually uses it nowadays to deliver materials to make students enthusiastic in learning English (Khothori et al., 2020). Supporting this, online education has become a mainstream way of education through its empowerment with interactive web technology and in particular utilizing web-based technology in teaching writing (Turmudi, 2020). The adoption of online

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education surely lies behind the time and place flexibility as it creates students to be more self-regulated and autonomous learner (Lam, 2015). Additionally, Kara et al., (2021) highlighted on his research's result that the path analysis indicates the relationships among self-regulation in three types of online interaction and learner outcomes.

As consistent with the prior research, the results imply that the improved self-regulation for interaction results in improved learner outcomes of perceived learning and satisfaction. In line with this, writing skill in English has always been demanding for the Yogyakarta University students. It is also an important research subject for the EFL teaching and learning in Yogyakarta. With the traditional English writing teaching mode of university, teaching only occurs in the classroom.

This study examined the using of CALL in the form of online software with the little concern on face-to-face teaching to English writing in a university and explores how CALL benefits English writing teaching and learning via experimental research and design. As Wahyudin (2018), supported this by stating that online learning facilitates several instructional methods that would be infeasible or at least difficult in traditional settings. The asynchronous nature of many online discussion groups allows time to think deeply about the issues at hand and spend time constructing a thoughtful response (Medicine, 2007; Wahyudin, 2018).

Bringing CALL into curriculum is investigated by considering CALL for occasional use such as for independent study, for developing particular skills, and as the focus of a course. Although CALL is effective in developing language proficiency but is not as popular as e-mail or the Internet. We argue that, by using these tools to produce a computer-based learning environment, it can become effectively integrated into the learning process (Gillespie & McKee, 1999). CALL shows that educators are able to increase their availability via e-mail, chat groups, and asynchronous bulletin boards (FitzPatrick & McKeown, 2020). By using CALL, teacher provides multimodality of assessment available in many formats such as hypermedia, and instant feedback benefitting flexibly for many students rather than done by conventional class through paper-and-pencil assessment (DeSouza & Fleming, 2003).

There have been many studies concerned in the effectiveness of using CALL and technology enhanced learning, yet continued research concerning the implementation of

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CALL learning in enhance writing proficiency is needed the most (Al-haq & Al-Sobh, 2010). In the traditional EFL writing class in China, teachers mainly teach face to face, with less use of technology such as reported previously (Ting, 2020). The research's result as follows on the table as attached in the appendix-1. Frazier & Brown (2001) stated that there was a controversial issue surrounding the use of online and conventional classroom mode of delivery in second language classroom. Facing the problems Bahari (2020) argued that from past to now, CALL has developed to be advanced tool along with facilities provided by technology of computer (Bahari, 2020). Many researches have been conducted to discussing the effectiveness of using CALL on the language learning (Alberth, 2010a).

Research done by Gulnaz et al., (2020) stated that virtual activities should not be viewed as a division of learning environment or as a replacement for traditional classroom to any degree. Google apps enable the students to retrieve the learning materials so that they have more time to read and understand the materials before attending the traditional classroom. In this case, technology supports students in increasing their writing ability (Solihati & Mulyono, 2017).

In other ways, technology could help students to find out models of writings, so that students could motivate themselves to write better (Warnock, 2010). Among them, CALL in teaching writing skill has shown a positive effect on students' motivation as in his study on Learners Perspective in Using CALL shows a positive result in using NICENET in which a group of students who use online web-based writing has higher motivation that a group who use traditional method in writing (Al-haq & Al-Sobh, 2010; Spataro & Canavosio, 2011; Tsou, 2008).

Given those aforementioned issues above, it appears that technology as major factor plays a critical role in the success of any online or computer assisted language learning program (Alberth, 2010b). For countries such as Indonesia which have lack of network, internet loading speed and connection reliability may be a barrier in some towns and small villages. Hasan & Akhand, (2010) stated that their research emphasized on under the process approach of writing a text, they found that many students were difficult to mapping their thoughts since they have never been taught that kind of technique.

The researcher found that the students retreated back to their old-fashioned paragraph

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writing without providing the structure of a paragraph, namely topic sentence, supporting details and a conclusion. Language teachers like video materials and quiz presented to their students because it motivates learners, it figures out the real world in the classroom, contextualizes language naturally and enables learners to experience authentic language. Students like it because video presentations are interesting, challenging, and stimulating to watch (Islam et al., 2021). In line with the case of the students at University of 'Ayisyiah Yogyakarta which habituated to memorizing the content of any subject without understanding. In the end, they take all the materials and reproduce them in the examinations and it brings negative impact to their writing skill and understanding.

Although there is a great benefit of computer assisted language learning on the learners' language performance, many schools and universities do not utilize their classrooms and their computer laboratory, and CALL software to teach writing. This gap motivates the researcher in conducting this empirical study aimed to investigate on how effective CALL in a form of e-learning software in teaching writing. As those findings might serve others evidence toward how effective of using CALL in our local teaching and learning environment.

This study then aimed to investigate on (1) How effective is using of CALL for teaching writing at Health Study Program in University of 'Ayisyiah Yogyakarta?, (2) What is the students' perception towards CALL program?

## **METHOD**

### ***Design***

The study used quantitative-qualitative data to investigate the effectiveness of CALL. Approach implemented in this research was experimental one group pre- post-test design. The study employs two variables: dependent and independent variables. The independent variable of this study is the using of CALL program in teaching writing functions as X or treatment whereas the dependent variable of this study is the effectiveness of using CALL on students' writing proficiency and students' perception before and after treatment function as Y1 and Y2.

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### ***Population and Sampling Technique***

The total sampling of this study was 157 with 69 Male and 88 Female of the Health Department students in University of 'Ayisyiah Yogyakarta spread in 9 different classes of academic year 2019/2020 who took English for Daily Usage specified at Writing skill at the third semester. *Simple random sampling* was used as the Sampling Technique of this present study.

### ***Instrument***

This study had used the following instruments to help the researcher analyze the students' writing proficiency. The instruments were **the** achievement test and the post-instruction perception questionnaire.

Pretest was distributed to students prior and posttest given after the treatment to investigate the significant effect of using CALL in the form of <https://unisayogya.learnsocial.online/> in teaching writing. In other word, it was used to measure the change made by the students before and after the model of teaching writing developed. This test required students to write Recount text. The length of text which the students required to produce was 200-250 words or one page of paper. The time allotted for this test was 45 minutes.

The second instrument was the post-instruction perception questionnaire The researcher adapted the questionnaire from (Chuo, 2007) to answer the second research question. The questionnaire consists of 18 statements in a 5-point Likert scale format. Participants were asked to choose one of the options strongly agree, agree, neutral, disagree, and strongly disagree from each statements in terms of (1) Perceived Ease of Use, (2) Perceived Usefulness, (3) User Acceptance.

In addition to both instruments was the E-learning Software. This website function as a treatment process. This platform <https://unisayogya.learnsocial.online/> is a learning platform which acts as a LMS (Learning Management System). This was setting up to be private only for classroom purposes. Teacher can provide a learning material, measure the

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progress of students, and augment on-campus course. Students can turn-in assignment or upload assignment for their teachers to view and grade. Teacher can annotate the assignment directly in this platform to provide an instant feedback. Those benefits can be seen on these pictures below.



**Figure 1 Students do the assignment, drill, quiz on the books provided online. Teacher can also add additional materials.**

### *Data Collecting Technique*

The procedures had been conducted were:

1. Pre-test was aimed to know the students' writing proficiency before and after being given the treatment.
2. The treatment had been given to students where the instructor taught the class with a little concern in face-to-face classroom along with teaching and learning process under CALL in the form of online software Instructional Program.
3. Post Test. It was aimed to know the students' writing proficiency after giving the treatment under online classroom.

The procedures of teaching writing in online program were:

1. Students open their online platform after being registered, read the materials on the book, and did many drills provided at <https://unisayogya.learnsocial.online/>
2. Lecturer posted some additional materials which related with the printed material.
3. Lecturer also posted some assignment and quizzes, then instructed students to submit their writing assignment on online platform.
4. Lecturer tells students to post their thought, discuss the related materials, give peer-feedback, self-correction on online platform.

**Data Analysis Technique**

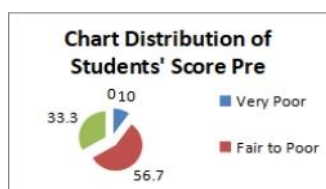
The first data of this research was analyzed by using SPSS version 21. The students' achievement data were taken from pre- and post-test tests' result and it was analyzed using descriptive statistic (mean score, median, modus, range, standard deviation). The inferential statistics were aimed to test the hypothesis. The current study used non-independent t-test or *paired/matched t-test* to compare the means of two variables in one group (Pre-Post).

**RESULT AND DISCUSSION**

**Results**

**The Findings of Students' Pre- and Post-test Scores**

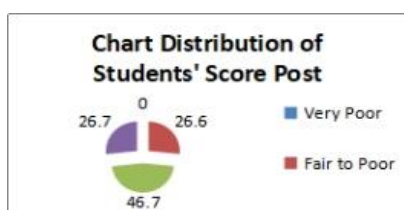
**Pre-Test**



**Graph 1 The Distribution of Students' Scores on Pre-Test**

Pre-test was conducted before doing the treatment through the teaching and learning process under online website instructional program. As shown in the graph 1, over half the participants observed, 56.7% are in “fair to poor” category of the writing score, 10% in “very poor” category and 33.3% in “good to average” category. The pre-test result shows there are no participants obtained “excellent to very good” category of writing. The finding of the pre-test implies that the students' writing quality needs to be improved. Therefore, there should be an innovative treatment to increase students writing competence.

**Post-test**



**Graph 2 The Distribution of Students' Score on Post-Test**

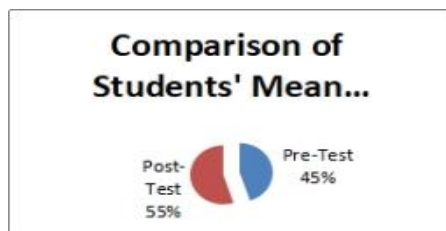
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Post-test is given after applying the treatment. The treatment is designed to ensure the effectiveness of using CALL in the form of online program. It is done after the students' is given the treatment with six meetings in the platform <https://unisayogya.learnsocial.online/>. As shown in the graph 2, most of the students, about 46.7% obtained "good to average" writing score; 26.6% of the students obtained in "fair to poor" writing score and 26.7% or 8 students obtained "excellent to very good" writing score. There are no students obtained "very poor" writing score.

### **The Comparison of students' Pre-Test and Post-Test Score of Students' Writing Composition**

Both Pre-Test and Post-Test are done to measure the students' performance before and after teaching process under treatment. The tests are used to check and find out whether the approach/technique works or not. The result shows that there is a significant different score after students' are given online software. As a comparison, the mean score in pre-test is 62 while in post-test is 76, in which the gain score is 13.75. Then, the maximum score in pre-test 74.38, while in post-test 90, and the minimum score in pre-test is 50.63, while in post-test is 63.13, in which the gain score is 12.5. Last, the study shows the maximum score of pre-test is 74 and the maximum scores of post-test 90 with a gain score of 15.63. The differences on the gain scores both in pre and post-test indicates that there is a different impact on students' writing proficiency before giving treatment and after giving treatment. It is clear that there is an improvement on students writing proficiency after being given treatment under online software.

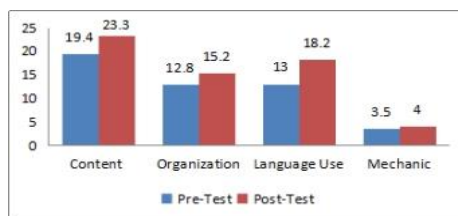
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**Graph 3 The Comparison of Students' Mean Score of Pre-Test and Post-Test**

As revealed in the charts, students' mean score in post-test increases 13.75 point from 62 (45%) for pre-test to 76 (55%) for post-test. This result proves that teaching writing through online software improves students' writing performance.

**Means Score of Four Aspects of Writing Composition in Pre-Test and Post-Test**



**Graph 4 The Means Scores of Four Components of Students' Writing Composition**

The chart above compares the result of pre-test and post-test of the four aspects of writing composition, namely content, organization, language use, and mechanics. From those differences of means scores, three aspects of students' writing composition increased significantly; they are content, organization, and language use. Meanwhile, mechanic aspect shows only a slight improvement.

**The Analysis of Paired Sample T-Test**

According to the result of the normality of distribution both pre-test and post-test scores, the computation using *paired sample t-test* could be done to find out whether there was a significant effect of teaching writing under online program.

In addition, non-directional hypothesis is used in this research to find out the result of this research. The non-directional hypothesis can be seen from the following description.

**H<sub>0</sub>** = there is not a significant effect of using CALL in teaching writing for the students of Health Department in University of 'Ayisyiah Yogyakarta..

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**H<sub>1</sub>** = there is a significant effect of using CALL in teaching writing for the students of Health Department in University of 'Ayisyiah Yogyakarta.

A *paired sample t-test* has been conducted to compare students' writing proficiency before and after implementing online classroom using software application. The result shows there is a major difference in the mean score for pre-test (M = 62.3, SD = 8.55) and post-test (M = 76, SD = 8.09) conditions;  $t(29) = 2.042$ ,  $p (.000) < 0.05$ . These results suggest that teaching writing under online software instruction has a noteworthy impact on students writing proficiency. The probability value ( $p_{value}$ ) is less than the level of significance which  $p_{value}$  is  $.001 < 0.05$  (alpha value), and the  $t_{count}$  is higher than  $t_{table}$  ( $33.600 > 2.042$ ).

Based on the description above, it can be inferred that  $H_0$  is rejected and  $H_1$  is accepted. Because  $t_{table} = 2.042$ ,  $t_{count} = 33.600$  with  $\alpha (0.001) < 0.05$ .  $H_0$  is rejected when  $t_{count}$  higher than  $t_{table}$  ( $t_{count} < -2.042$  or  $t_{count} > 2.024$ ). Since  $t_{count}$  (33.600) is higher than  $t_{table}$ , then  $H_0$  is rejected and  $H_1$  is accepted. It means that CALL instructional program with online software learning management system gives a significant effect on writing competence of the freshman of students of Health Department in University of 'Ayisyiah Yogyakarta.

## **Descriptive Statistic Analysis of Post-Instructional Questionnaire**

### **Perceived Ease of Use**

The study exposes the result of students' preferences of each item on the Perceived Usefulness construct. In the first item of the questionnaire, 63.30% students' feels that their English skills improved as the result of online software as they choose Agree to the first statement. In addition, the second item indicates that the majority of the students' choose Agree and Strongly Agree to the second statement. It reveals that several students remain neutral or unsure whether online software can help them to interact with their classmates. Although, 40% students agree if online software can make them interact with their friends. Thus, on the sixth item, most of the students are strongly agreed if they enjoyed online software during the treatment.

### **Perceived Usefulness**

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The study exposes the result of students' preferences of each item on variable Perceived Ease of Use. The first item shows that 10 students' choose "Agree" to the first statement ("*My English skills improved as a result of online software*") or approximately 33.3% students' feels that their English skills improved as the result of online software. In addition, the second item indicates that the majority of the students' choose "Strongly Agree" to the second statement ("*The writing task in the online software related to my real-life experience*") or 36.7% students' thought that the writing task is close to their real-life experience.

In contrast, the third item indicates that most students found technical difficulties in using *online software*, the web-based instructional program. However, the study finds that several students responded variety answers on the fourth items which reveal they across the network issues while some students don't. Next, the fifth item shows that most students are neutral to the question "*whether they feel nervous or not*". Although, on the sixth item, most of students are disagree if they feel fear on using *online software* instructional program. The seventh item, however, most students remain neutral to the question "*they are getting accustomed to use online software technology for language learning*". Also, based on the chart above we can infer that several students' would feel slightly ease of using *online software* instructional if they didn't found the technical issues and felt fear or nervous during the treatment.

## User Acceptance

The study shows the result of students' preferences on each item of Use Acceptance construct. The first item shows that 17 students choose Neutral to the first statement ("*I prefer traditional writing instruction than online software*") or 56.7% of the students' feel that they are neutral whether they are prefer *online software* above conventional classroom. However, on the second item indicates that the nearly half students' choose "Agree" on the second statement (I would like to take another English course that has an *online software* instruction), it exposes that several students willing to take another course that has *online software*. Additionally, the third item reveals that mostly students' agree and strongly agree if *online software* is more interesting because the web-based. Moreover, researcher found that the

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majority of students agree to recommend other to use *online software*. Next, the fifth item expose that mostly students' are agree and strongly agree if they will use another *online software* more frequently in future. According to the result, we can assume if numerous of students' feels positive attitude toward *online software* instruction and much likely will use it on future.

## **Discussion**

This study has shown that CALL shared a common method as student and teacher obtain from traditional classroom. This method also applied and showed in e-learning software <https://unisayogya.learnsocial.online/> . This online software is managed to assist students' writing in some respects such as providing feedback, stimulate self-correction which usually presented in traditional class. Whiteman cited in (Al-haq & Al-Sobh, 2010) stated that many teachers still focus in the part of tenses, spelling, structure, instead of engaging students on the writing process which is why their writing is not managed and constructed well. In line with this, lectures have to teach their students in practical, different, and innovative way while giving them proper guidance on how to produce a better writing's construction. Supporting this, Jiang, (2021) argued that technology is able to be the best answer for this matter especially in boosting student's willingness to learn.

Therefore, the purpose of this study is two folds on, one hand this study attempts to prove whether there is a positive impact on students' writing performance through web-based instructional program, and on the other hand this study attempts to find the association of students' perception on the use of Online Software and the students' achievement on writing. Web-based instruction is an educational approach utilizing the interaction and informative qualities of the internet (Bahari, 2020; Turmudi, 2020) and it a viable option for today's universities.

Arslan & Sahin-Kizil (2010) found that *Finnish* girls, who traditionally have less access to and experience with computers than boys, benefitted greatly from their full and equal participation in an International English-Language e-mail project (Arslan & Şahin-Kizil, 2010). This evidence is similar to the findings that researcher observed during the treatment. About 80% students who registered on the course were active in posting their thought. Thus,

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this evidence suggests that electronic communication can bring out more equal participation among the second and the foreign language learner (Ting, 2020). Furthermore, many previous studies prove that learning through online software helps students in their writing proficiency since the nature for communicating through online course is writing. Prior study reveals that the group of students who applied web-based writing program indeed outperforms the regular writing group in most variables; include content, organization, and language use. The finding of this study supports the theory and previous studies above (Spataro & Canavosio, 2011).

The first research question was answered in that CALL online software instruction for teaching writing in Health Department of 'Ayisyiah University of Yogyakarta is effective to enhance students' writing proficiency. Being given pre and post-test and the teaching learning process using online software, the participants showed a significance effect on their writing proficiency. This finding is closely related with the result of close ended post-questionnaire which indicates that majority of participants accept and enjoy the CALL online software instruction when they learn writing proficiency.

The current study is supported by three levels of data such as pre-test and post-test of the experimental classroom. The students' mean score of pre-test before giving treatment is 62.1667, while in the post-test is 75.9157 with the gain score is 13.75. The second data is gathered through post-instruction questionnaire after treatment using online software. The third data is gathered through an analysis of the association between students' achievement (students' mean score of post-test) and students' post-instructional questionnaire. With respect to theories, previous studies, and the result of gathered data, the current study researcher proves that the hypothesis "there is a significant effect of using CALL writing of Health Department of 'Ayisyiah University of Yogyakarta" is accepted. It is proved by using *Paired Sample t-test* shows  $t_{count}$  is 33.600, which is higher than  $t_{table}$  2.042 and sig. level =  $0.001 < 0.05$ ; the average score of pre-test is 62.3 and post-test is 72. The second tested hypothesis ( $H_1$ ) shows that students have positive association, stated in order, where the association of Perceived Ease of Use and Achievement (PEOU → ACV) is 0.093, the association of Perceived Usefulness and Achievement (PU → ACV) is 0.493, and the association of User Acceptance and Achievement (UA → ACV) is 0.397.

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Furthermore, in depth discussion of this study divided into three sections which focus on the four components of writing composition and the result of students' perceptions after applying CALL online software instructional program based on the adapted close ended questionnaire.

### **The Students' Writing Score of Four Points on Writing Composition**

Prior studies stated that content is the most crucial aspect of assessing writing which involves development of thesis statement which describes further the main ideas with using several specific methods of development such as comparison/contrast, illustration, definition, example, description, fact, or personal experience (Jacobs, 1981). For example, the student number 1 (on the appendix of the students writing composition), he got 16 score in pretest on content because his writing has limited knowledge on the topic with little substantive.

His writing lacks detailed information on the object and it contains irrelevant information which is unnecessary to write on the essay. On the contrary, his achievement increased up to 27 in post-test since his written was mostly relevant with the topic, completed with detailed information, sufficient knowledge on the topic, adequate examples, and definition on essay. The current study shows the mean score of content aspect gain 19.4 in the pre-test, while in the post-test it reveals moderate change into 23.3 point with the difference of 3.9 points. The mean score of 19.4 can be categorized as "fair to poor" content aspects.

In post-test, the students' writing mean score has changed into 23.3 or categorized as "good to average" aspect. Comparing the result of pre and post-test, it presents that there is an improvement of one level of students' writing competence from "fair to poor" to "good to average". Thus, it can be said there is a positive improvement in students' writing on content aspects after the participant have been exposed with an instruction using a complementary Learning Management System based learning mode. This finding is in line with the previous findings mentioned that if students in experimental group (the group that exposed with web-based program) in favor of content and language use gain a better result in those aspects because they had a better chance of getting content and language use quickly and easily from websites, their peers and the teacher through sending and receiving messages (Al-haq & Al-Sobh, 2010).

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Organization includes the list of ideas in which it can help the writer to elaborate and explore what they want to write. Moreover, it covers fluent expression of ideas, logical sequencing, main points, supporting detail clearly and briefly stated, unity or cohesive and coherence, in assessing students writing performance in organization aspects, this study evaluates the aspect through extended profile criteria proposed by Jacob *et al* (1981). For example, the students' number 1 got 11 since his organization lack of logical sequencing or disconnected with the other sentences. However, on the post-test he got 18 since he had fluent expression on his essay and each paragraph reflects single purpose. The current study analysis shows the mean score of organization aspect of pre-test is 12.8 and post-test is 15.2. This reveals that students' writing score in organization is improving from "fair to poor" to "good to average" after being treated with LMS complementary web-based instruction. This finding is in line with the finding from Mukama (2008) his study shows how interacting and discussing through online software can develop organization aspect(Mukama, 2008). The study explains how a web-based can develop students' organization through expressing their ideas, commenting on online software, and explaining their arising thoughts. It is similar with the current study on how students' commenting and discussing through online software in free topic.

Language Use highlights about students' proficiency in using English grammar correctly on their writing which covers effective complex construction, agreement, tense, number and word order/function, article, pronoun, preposition, as suggested by theorists (Jacobs, 1981). This study evaluates whether or not students' writing was constructed appropriately; includes the basic use the basic agreement between sentence elements, use article, pronoun, and preposition. For instance, the students' number 2 (on the appendix of the students writing composition) got the score in pretest of 14 points since his writing had several errors in tenses and complex sentences. In post-test, he got 18 since he wrote simple constructions and minor errors in subject verb in agreement. The current study shows the students' mean score of language use on pre-test was categorized as "fair to poor" with the score of 13. While in post-test, it increased up to 18.2 or categorized as "good to average".

Mechanics entails the comprehension of using spelling, punctuation, capitalization, and word order appropriately. For example, the students' number 2 got score 4 in pre-test

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since his writing still had occasional errors of spelling and capitalization. Meanwhile, in the post-test he got the same score 4 for mechanic for the same level of mistakes. Overall, the students' mean score in pre-test and post-test shows a small change, the gain score between pre and post-test in mechanic aspect is only 0.5 point. The average of students' got 3.5 points "fair to poor" level for their mechanic aspect. Then, it improves slightly into 4.0 "good the average" after being treated. It is also indicates that mechanic does not take a massive change since students' write their thoughts in an online course without having looked at checker facilities on web itself. The finding supports the previous studies, Kessler in Kessler (2012). In his study, working collaborative in online software space explain that students were able to make changes to form correctly when asked, but they often chose not to do so in their writing, explaining that they found those errors to be less important than meaning. The finding confirmed the slight improvement of students' writing performance after they were exposed in LMS writing instructional.

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Moreover, the researcher also considers that the improvement of students writing is not totally caused by using online software, but there are also other integrated factors that play a part on this process, such as Learning Management System and pedagogical instructional grand design. Through face-to-face and online mode of teaching during the treatment, all participants' learned many subjects such as grammar, extensive and intensive reading, tenses, language use, advanced and necessary vocabulary, and so on so forth, since the population of this study was coming from pre basic and basic students who only took English subject as additional course, not compulsory one.

The instruction from teacher, the time span of implementation, the quantity and quality of writing may affect the result of using online software in learning writing.

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### **Students' Perception after Applying Web-Based Instructional Program**

From the questionnaire test, the majority of students' response positively toward Perceived Usefulness and User Acceptance construct but less favor in Perceived Ease of Use. Response of Perceived Ease of Use shows that many of the students still thought that web-based instruction is slightly uneasy to use because of technical issues during the treatment. Derived from the third result about students' perception associated with students' perception, this study found that there is a statistical significance was found in the relationship between the composite perception scores and the improved writing performance score. This finding is consistent with the previous research result from (Michelli, 2013) which shows there was a mutual relationship between students' attitude and their academic achievement. Based on the path analysis, students' positive perceptions of the web-based instruction ensure a tendency toward better language performance result. Agung & Surtikanti (2020) posits that perception is a process that occurred in somebody in order to respond toward his environment; it consists of organizing and interpreting various stimuli into psychological experience. The current study shows that the majority of students' accept the CALL online software instruction; and they thought if web-based treatment were useful to increase their English skills. In spite of the fact, several students' assumed that the online software program is still inconvenient for them because of numerous technical issues while using it.

### **CONCLUSION AND SUGGESTION**

Based on the result, the study has answered the two of research questions. In research question 1 has been answered as there is a significant effect of using CALL online software program on students' writing proficiency in Health Department of 'Ayisyiah University of Yogyakarta at writing class. It is proved from the higher score on post-test than the pre-test. Based on the result of first hypothesis testing, it shows that there was significant difference in the gain scores for pre-test ( $M= 62,3$ ;  $SD=8.55$ ) condition;  $df= 29$ ,  $t_{table}= 2.042$  and  $t_{count}= 33.600$ . The result of paired sample t test showed  $t_{count} > t_{table}$  with sig  $\alpha < 0.05$  or  $H_0$  is rejected and  $H_1$  is accepted.

This study has also answered research question 2 which reveals that during the online learning treatment, the students had a favorable perception on the online instructional

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program. Moreover, the result of questionnaire reveals that students' responded positively on the use of online writing instruction during the treatment. However, several students' still thought if online instruction were inconvenient from them, since the variable Perceived Ease of Use got the lowest mean score unlike the other variables like Perceived Usefulness and User Acceptance.

This study suggests that while in fact most of students are able to study comfortably in a full online classroom, only a few of student prefer face to face due to a lack of connectivity and inadequate of technology facility. For this reason, it is recommended that future studies critically examine the characteristics of the students who are more likely to succeed in online, in face-to-face or in the combination of both. In particular, future research may be needed to be focus towards examine and present individual characteristics that could reliably predict students' success whether in online, traditional classroom, or the combination of them. Although they might make irrelevant points during online discussion, they were not concerned as much as they would be during a traditional discussion.

The implication is that online discussion may be provided as an alternative to traditional discussion for students who find traditional discussion intimidating. Perhaps it is even sensible to suggest that, as far as class discussion is concerned, students should be given a choice concerning learning environments options.

**LIMITATION**

Another limitation concerns at this study did not employ a standard platform commonly used for online learning today such as having a video feature as in Zoom or Google Meet which has richer communication tools and better data management system. Even though this online application could not allow student to share video each other to tell feedback, student is possible to post comments to the assignment column or quiz attempt during board discussion, to have a chat with the teacher or to their friends privately. However, it would be better if it had enabled students to share their video or to have a video feature where they can share in face to face on the same system.

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Appendix-1 Table of Learning: Strength and Weaknesses

Mode of learning	Strength	Limitation
<ul style="list-style-type: none"> <li>▪ Online</li> <li>▪ Asynchronous Classroom (e.g., discussion forum or boards)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Enhanced time for learners to reflect.</li> <li>▪ Assists introverted students to be brave and engaged in room chat without feeling shy.</li> <li>▪ Let individuals to participate at own time and pace</li> </ul>	<ul style="list-style-type: none"> <li>▪ Requires self-discipline on the part of learners.</li> <li>▪ Too much additional assignment given by the lectures</li> </ul>
<ul style="list-style-type: none"> <li>▪ Synchronous Classroom (e.g., email, chats, audio conferencing, video meeting)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Allows immediate interaction.</li> <li>▪ Allows individuals participate at location of convenience.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hard to ask question and get it answered particularly when chats are rapid and filled with many voices</li> </ul>
<ul style="list-style-type: none"> <li>▪ Online Materials Mode of Delivery (e.g., text, video, audio, cartoon)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Allows learners to follow content at own time and pace.</li> <li>▪ Learning content can be easily replicated and distributed to all learners</li> </ul>	<ul style="list-style-type: none"> <li>▪ Possible interrupted or choppy delivery due to traffic congestion</li> <li>▪ Additional work load on the part of the instructors to prepare the online resources</li> </ul>
<ul style="list-style-type: none"> <li>▪ Offline learning</li> <li>▪ Face-to-face session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Giving faster conversation (e.g., immediacy of response, interactivity)</li> <li>▪ Let participants to see traditional tuition such as gestures.</li> <li>▪ A space for building interpersonal connection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Scope is limited only for learner discussion due to time constraints.</li> <li>▪ Hard for introverted learners to speak up for fear of embarrassment.</li> <li>▪ Needs effort and time to travel to a fixed location</li> </ul>