

Modifying Ict Competency Development Model To Teaching Writing: Assisting Students To Enhance Their Writing Quality

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ABSTRACT

Information and communication technology literacy is something very essential since digital tools are used almost in every aspect of life, especially in this pandemic era where people count on the tools to make them able to stay at their place but still interconnected with other people. These tools are at large, yet not all students have used them to support their academic needs. There are many of the tools that can actually help students in their academic life. One aspect of the academic life is learning to write. Writing is still considered complicated for students since they are required to know what to write, correct words to use, accurate grammar and mechanics to implement, and so on. However, helps are around. In this study, the researchers adopt ICT competency development model issued by UNESCO to help students write an essay. The methodology employed here is qualitative descriptive. The researchers used three instruments to collect the data namely: documentation, observation, and questionnaire. The documentation was done by analysing students' worksheet. The observation is done by joining the teacher and the students in the virtual class while the questionnaire is distributed to all of the students (40). After conducting the research, it is found that the adoption of ICT competency development model into essay writing class can help students enhance their writing quality. This research is beneficial for lecturers or teachers who teach essay writing. By following the step by step of ICT competency development model, students can be guided so that writing an essay will be much easier.

Keywords: essay writing, ICT competency development model, teaching writing

INTRODUCTION

The main functions of writing pedagogy in an academic context is to facilitate students to be able to produce written works through the acquisition of contemporary practices in the domain of academic literacy (Ahmad, 2019). To improve the quality of students' writing, it is required the effective ways to teach writing. There is a relationship between applying teaching methods and the quality of students' writing (Dockrell, Marshall, & Wyse, 2016). Sometimes, the lecturers in teaching writing is

lack practice to write essay writing. Writing skills can be acquired and mastered by the path of practice and a lot of practice.

Giving writing theory to students was not directly proportional to the expected results. Students still have difficulty getting ideas to put into writing. When they get ideas to be written as material, the writing they write is not critical, whereas in 21st century learning, students are required to be able to think critically and creatively, be able to collaborate, and

communicate their work (Ahmed, 2016). Writing well and critically is indeed not easy because writing is a high-level skill that can continue to develop through the interaction between student's skills and cognitive abilities, instructional contexts, and the demands of writing tasks (Mahmood, Mobeen, & Abbas, 2020). Cognitive abilities, instructional context, and writing assignments must be considered carefully by lecturers in higher education to help students have good and critical writing skills

Critical writing skills are needed to form graduates having high competitiveness. This skills as stated the English language education curriculum university in Indonesia. The curriculum types is the Indonesian National Qualifications Framework (KKNI) curriculum, it focuses on the formation of highly competitive alumni. In the KKNI curriculum, the course syllabus is based on the competencies, the students must be synchronized with the learning objective of program study. In the English Language Education the researchers conducted the research at the alumni profiles include: 1) English teachers; 2) textbook author; 3) developer of assessment tools, 4) developer of English learning programs, 5) developer of English learning programs for children; 6) translators, 7) English service providers.

Based on the alumni profile, writing skills are indispensable for the formation of highly competitive alumni. Therefore, writing is taught from the first semester to the sixth, which begins with a discussion of how to write correct sentences to the level of writing various types of essays and academic writing. In this study, researchers focused on essay writing lectures. The aim of the essay writing course is to gain knowledge, insight, and writing skills. However, the course objectives were not easy to achieve. In the lecture process, many problems were found. The problems include difficulty finding ideas, difficulty expressing ideas, language errors both in terms of word choice and grammar, and lack

of student motivation. If these difficulties are not resolved immediately, they will result in ongoing obstacles in the lecture process (Salikin & Tahir, 2017).

Among the various types of writing taught, one type that is considered difficult and still has low learning outcomes is essay writing. Moreover, they have difficulty putting together ideas and presenting solid evidence to make a well-organized essay (Kaur, 2015). Even though essay writing is an important component in teaching and learning English as a second language (English as a second language / ESL), especially in universities (Vögelin, Jansen, Keller, Machts, & Möller, 2019) as well as what happens in general in Indonesia, English is the first foreign language taught in school, not a second language. In particular, this condition also occurs in an English Language Education Study Program, in a university, which is used by the researchers to conduct the research.

From the results of preliminary observations made by researchers, there were three lecturers who taught essay writing courses in the fourth semester. The three lecturers teach in four different classes so that there are two classes taught by the same lecturer. In the classroom, two lecturers teach essay writing by providing theory about essay writing while another lecturer uses critical discourse analysis at the pre-writing stage. In addition to making classroom observations, the researchers also looked at documents which were student essays that were submitted to lecturers as final semester assignments.

Meanwhile, from the online questionnaire that the researchers distributed to the students who had taken writing courses in the fourth semester, they stated that writing essays was difficult due to their lack of insight, lack of vocabulary they had, and teaching techniques of lecturers in the classroom.

The next question is why writing an essay is considered difficult. The majority of students

answered because of their lack of insight. The following is a recapitulation of student answers regarding the reasons for writing essays that are considered difficult.

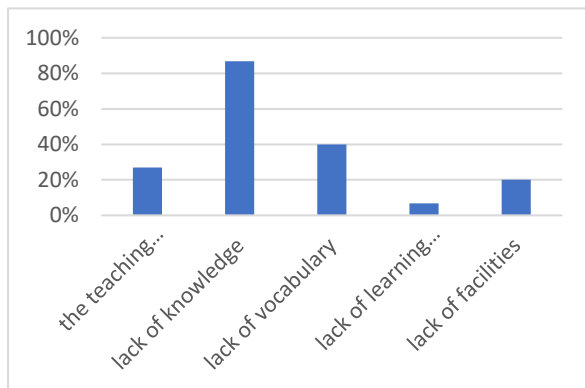


Figure 1. Recapitulation of student responses regarding the reasons for the difficulty of writing argumentatively.

Students consider that writing essays is difficult, especially because of their lack of insight, even though the ability to write essays is very important for students to master to articulate their ideas in an academically feasible pattern.

LITERATURE REVIEW

Teaching Writing

The way of teaching writing has undergone a significant change. Prior to 1970, teaching writing was carried out using rhetoric, namely by viewing writing as a process of translating ideas into words using writing rules so that the writing became effective. Teaching writing includes teaching on how to identify the features of an effective text, asking students to practice making effective sentences and giving them feedback on how to make effective sentences.

This way of teaching is opposed by Emig (1971) — who has conducted research on a number of elementary school children as they write. Likewise with Britton, Burgess, Martin, and McLeod (1975) — who introduced the functions of

For this reason, it is necessary to improve the way lecturers teach in class because it could be that teaching methods are another factor that causes students to not succeed in mastering essay writing skills (Salikin & Tahir, 2017) and indeed students also confirm this (it can be seen in the graph) that the cause the second is the lack of vocabulary and the third is the teaching methods of the lecturers.

This study explores the benefits of adopting ICT development model to essay writing classes to enhance the students' writing quality. In this research, the researchers do not only try to look at the improvement of the students' writing skill but also their perspectives of the adoption of ICT development model to essay writing classes. Therefore, the question to be answered is: "to what extent does the adoption of ICT development model help students enhance their essay writing quality?"

various types of writing genres and did not discuss the features of their writing. This perspective is also expressed by Flower and Hayes (1980). In this model, writing is seen as a process to solve problems in which ideas are built to create a communicative purpose. Teaching writing involves a number of cognitive skills such as planning, translating and reviewing. Although indeed learning how to write will be beneficial for the whole writing process, it is not a fundamental skill in writing.

This writing teaching shifts from a focus on writing features to the writing process. This writing teaching includes: journal writing, giving feedback with friends, collaborating in groups, making outlines, free writing, using multiple drafting, writing with different audiences, and class publications. With these various activities, it can be concluded that there are

three approaches in learning to write: 1) developing writing skills with communicative purposes; 2) develop the ability to coordinate and create different processes to produce a piece of writing; 3) develop and understand the social context in writing (Galbraith & Rijlaarsdam, 1999).

Among several process-focused writing teaching strategies, there is one strategy that is considered quite effective because it has gone through various tests (80 studies) (Graham & Harris, 2013). This strategy is called SRSD (Self-Regulated Strategy Development). SRSD is an effective method for teaching writing to students with various genres including personal narratives, opinion and persuasive essays, report writing, expository essays, story writing, and writing for exams (Mason, Reid, & Hagaman, 2012). There are six stages in learning to write using the SRSD strategy as follows: 1) developing and activating knowledge for writing and self-regulation; 2) discuss; 3) provide models/examples; 4) remind; 5) provide support; 6) do reflection.

Another strategy in learning to write is Spencer's SFV model (2005). SFV stands for sensory details, figurative language, and vivid words (Spencer, 2005). This model consists of three processes, namely free writing, whilst writing and post writing. At the free writing stage, writing techniques in the form of brainstorming and mind mapping were carried out. While in the writing process, the writing features are explained according to the genre being taught. In the post-writing process, the thing to do is to revise and present the writing.

Another writing strategy is the implementation of the Contextual Teaching and Learning (CTL) approach (Crawford, 2005). According to research conducted by Satriani, Emilia, and Gunawan (2012) shows that the advantages of this strategy are: (1) encouraging students to write; (2) increasing students' motivation to participate actively in writing classes; (3) helping students develop their writing; (4) helping students solve their problems; (5) provide a way for students to discuss and interact with their friends; and (6) help students summarize and reflect on the lesson.

From those many teaching writing strategies, none can solve writing problems all at once. That is why another strategy is still needed. One of the strategies that is considered suitable is the use of ICT (Jeyaraj, 2020).

Modified ICT Competency Development Model

ICT Competency Development Model was issued by UNESCO in 2011. This model covers several learning stages, namely: accessing, understanding, integrating, communicating, evaluating, and creating. As its name, these stages are for developing someone's ICT literacy yet in this research, the researchers adapt the stages for helping students enhance their writing quality. It is adapted since the researchers took all of the stages but add one more stage namely proofreading. In the stage of proofreading, the researchers use artificial intelligence to proofread the students' writing

Table 1

Students and Teacher's Activities

No	Stages	Lecturer Activity	Students Activity
1	Accessing	Giving a topic Asking students to access the internet to find two related articles.	Accessing the internet Finding two related articles from the internet.
2	Understanding	Asking students to understand the text they have found.	Understanding the text they have found
3	Processing	Asking the students to process the information; which one they will use in the text and which one will not be used.	Processing the information they have gained: which one will be used, which one will not.
4	Integrating	Asking students to write their first draft by integrating the idea they have gained and what they have in their mind.	Integrating the idea they have gained and the idea in their mind.
5	Communicating	Asking students to work in pairs, giving suggestion to each other about their draft.	Working in pairs, listening to their friend's suggestion on their draft.
6	Evaluating	Asking students to evaluate their draft, which ideas are to be included, which ones are not.	Evaluating the draft.
7	Creating	Based on the sources they have read and input that they have gained from their pair, students are asked to write their second draft.	Writing their second draft
8	Proofreading	Asking students to copy and paste the draft into an artificial intelligence to get correction on grammar, punctuation, and mechanics.	Copying and pasting their draft into an artificial intelligence to get correction on grammar, punctuation, and mechanics.

This ICT competency development model is integrated. In this model, students need to

use their digital literacy to enrich the content of their writing. The digital literacy

works in two steps. In the first step, the students have to browse at least three articles from some websites. Their ability to navigate from one website to another for finding suitable articles. The other step using digital literacy is to use an artificial intelligence for getting corrections related to grammar, mechanics, and dictions. The use of artificial intelligence in this step is to introduce the students that helps are at large. Nowadays there are many artificial intelligences created to help our daily activities (Gera & Chadha, 2021) and many of them have not been optimally used. This research uses qualitative descriptive method to describe how much modifies ICT Competency Development Model influences the students' writings. The data is taken by using three kinds of instruments namely observation, documentation, and focus group discussion. The observation is done by joining to the teacher's online classes. Since the interactions are not only by one media, the researchers also join the class' whatsapp group. The materials, in addition, are provided in the campus' LMS. Hence the researchers also enrol in the LMS. During the activities carried out in the whatsapp group, LMS, and virtual class through zoom meetings, the researchers have field note. The documentation is done by analysing the students' writing before joining the classes with the model and also before them. The documentation check list contains some indicators taken from writing scoring rubric. The last is focused group discussion. In this activity, the researchers write down the comments given by the participants and do some coding to classify the answers.

Research on the use of artificial intelligence has been done by many researchers (Chen, Xie, Zou, & Hwang, 2020). Shockingly, there is also research saying that the utilization of artificial intelligence is somehow still neglected (Pikhart, 2020). This research would like to describe the increase of quality of the students' writing when they join a teaching learning process where digital literacy is used.

METHODOLOGY

Design

Sample

The sample is the students who are taking the class of "Essay Writing". There are forty students who are involved in the study.

Research Instruments

The instrument is classroom observation which is done virtually. The observation is done in several ways such as through zoom meeting, WhatsApp group, and also the campus' LMS. This is done to investigate whether or not the lecturer implements the Modified ICT Competency Model in her writing class. Documentation is the next instrument. The documentation is done by analysing the students' writings. They were analysed using the criteria from writing scoring rubric. The last instrument is focused group discussion. In this activity, the students are interviewed together about the change that they experience when they create the writings before they join the class using Modified ICT Competency Model.

Data Analysis Method

Data from observation will be analysed by checking the field note taken when the teaching and learning process is taking place. The data is then used to check

whether the teacher implements the model correctly or not. The data collected from questionnaire will be analyzed and described in a form of paragraph. In analyzing the questionnaire, the reliability of questionnaire is counted as follows: a) counting every answer of the questionnaire to determine the frequency, b) counting the percentage by using $\frac{f}{x} \times 100\%$, c) describing the data from questionnaire. Lastly, the data from focused group discussion will be analyzed by transcribing and concluding it.

Observation result

The observation was done by the researchers through more than one learning media. When the teacher sent the messages to the students through WhatsApp group, the researchers were in the same room with the teacher and they could observe what the teacher wrote and how the students replied. When the teacher entered zoom meeting, the researchers also had permission to join the forum for observing the class. The following is the teacher’s activities taken from teaching scenario of one of the meetings:

RESULTS

Table 1
Teaching Learning Process Using Modified ICT Competency Development Model

Pre Activities	<ol style="list-style-type: none"> 1. Greeting students through the WhatsApp group application 2. Asking students to read the materials and videos provided in the LMS 3. Checking attendance 4. Announcing via WhatsApp group the topic for personal essay narrative writing and ask students to search for at least three articles on the internet with the same topic (accessing) 5. Asking students to read the three writings carefully and understand them (understanding) 6. Asking students to decide which ideas to take from the three writings for their own writing (processing) 7. Asking students to integrate the ideas they get from reading with their own ideas and put them in the first writing/draft (integrating)
Whilst Activities	<ol style="list-style-type: none"> 1) Asking students to enter zoom link 2) Asking other students to provide comments or assessments of a friend's writing (communicating) 3) Considering whether to take the friend’s suggestion or not (evaluating) 4) Ending the synchronous session (students are asked to exit the zoom application) 5) Through the WhatsApp group, the teacher asks students to write a second draft (creating) 6) Asking students to copy and paste their essays into machines with artificial intelligence to correct diction, mechanical, and grammatical errors (proofreading).
Post activities	<ol style="list-style-type: none"> 1. Asking students to upload their writings to LMS 2. Providing feedback and assessment of students’ writings

From the above teaching scenario, it is clear that the teacher implements modified ICT Competency Development Model in her writing class. The media used are commonly zoom and WhatsApp group. However, all of Documentation result

The documents analyzed are the students' worksheets. The researchers analyzed the documents based on the scoring rubric of essay writing. The following is some excerpts taken from the students' A worksheet of their first draft":

The piece of writing above is the first draft of one of the students joining the research. The red underline shows logic and organization. Logic is a formal system of analysis that helps writer invent, demonstrate, and prove arguments. In the piece of writing above, the student wrote "let me write anything about my cat". The use of the word "anything" here is confusing because it does not show the boundaries or the limitation of the content. Hence the last sentence of the paragraph cannot be considered as the thesis statement. When an essay does not have clear thesis statement, then the organization of the writing is not clear either.

The next indicator is the use of the language. The writer makes confusion in grammar. It can be seen from the green underlines. Sometimes the writer addresses the cat as 'she' but some other time, the writer addresses the cat as 'he'. This is probably because the grammar in the writer's native language does not differentiate the way of addressing male and female single third person. Other evidence showing that the writer makes mistakes on grammar and is probably

the assignments and other sources provided by the teacher can be accessed through the campus' Learning Management System (LMS).

let me write anything about my cat."... (1) He has blue eyes..... (2) she always obeys.... (3) Because she behaved clean and elegant, I was very proud of her... (4) There are many more benefits of cats, because cats are the pets of the prophets Muhammad SAW...

influenced by his or her native language is the use of verbs. The writer also sometimes uses present tense and for some other sentences, she uses past tense. The confusion is not only in the use of grammar but also in the development of ideas.

Most ideas are unsupported. The statements made by the writer are not supported by suitable evidences. As it can be seen from the sentence underlined by purple colour, the writer wrote that cats have many benefits because cats are the pets of the prophet Muhammad SAW (peace be upon him). Instead of supporting the statements by mentioning the benefits, the writer writes that cats are the prophet's favourite pets. The reason is not suitable.

From the discussion above, it is seen that the first drafts of the students still do not achieve the target of the lesson which is to be able to write a descriptive text. However, after the students follow the modified ICT competency development model used by the lecturer, her writing quality improves. It can be seen by the following excerpt:

1) However, the situation begins to change when Molly as the sixth family member came.. 2) She was a little cat with a small nose and big eyes..... 3)..... then with her tail stood up indicating that she was happy, 4) People say cats are lazy

The above test was written by the same person as her final draft. In the point of view of logic and organization, the essay has been logic and well organized. It is started by the existence of correct thesis statement. The thesis statement is: "However, the situation begins to change when Molly as the sixth family member came." This thesis statement is followed by

The next indicator is the use of language. If in the previous writing the writer is inconsistent in addressing the sex of the animal, sometimes she calls the cat 'she' and sometimes 'he', the fact is not found anymore in this piece of writing. The writer keeps addressing the cat as 'she'. The purpose of the writing is also clear here. The sentences in the last paragraph represent the sentences in the beginning of the writing: "My house was warmer because of her. She really made me and my family felt happy every day." The sentences can represent the statement of the writer in the first paragraph which shows that she felt the change in her house when the cat came.

Hence it can be inferred that after joining two meetings of teaching learning process using modified ICT competency development model, the student can

The above writing is written by another student. The writing is written before the student joins the class of writing using modified ICT Competency Development Model. In the thesis

and not as smart as dogs. I do not think so. I think Molly was a pretty smart cat, although sometimes she was a little lazy and always slept wherever she was.... 5) my house was warmer because of her. She really made me and my family felt happy every days...

the next paragraphs whose topic sentences are: 1) She was a little cat with a small nose and big eyes; 2) Since she came home, the atmosphere in my house had changed; 3) People say cats are lazy and not as smart as dogs; and 4) Two months ago she passed away. Those topic sentences are in line with the thesis statement. They show the step by step of the cat's life, when she was little until finally died.

improve the quality of her writing. The following picture is another student's piece of writing before the teaching learning process using modified ICT competency development model:

Coffee is a drink made from coffee beans that have been roasted and ground into a powder.. (1) Because the benefits of coffee itself are to reduce stress and depression.. 2) drinking coffee can instantly improve mood and make things better...(3) The first interesting fact is that coffee is the second largest trading commodity in the world.. (4) The third is coffee discovered by a goat shepherd....(5) The fifth is that Mecca had banned coffee...(6) And the last thing is adding creamer to coffee makes your coffee warm longer...(7) coffee will stay warm 20 percent longer when you add creamer to coffee...(8)

statement, it is written that: drinking coffee can instantly improve mood and make things better. By reading the thesis statement, the expectation of the reader is that the next paragraph would tell about

how coffee improves mood and the third paragraph would tell how coffee makes things better. However, what is found in the next paragraphs are: 1) The first interesting fact is that coffee is the second largest trading commodity in the world; 2) The third is coffee discovered by a goat shepherd; and 3) The fifth is that Mecca had banned coffee. From these three topic sentences, it can be concluded that they do not have anything to do with the benefits of coffee that can improve someone's mood and can make things better as it is stated in the thesis statement. Thus, it shows that the student does not have good organization of the writing and the purpose of the text is not clear either. Seen from the grammar point of view, the writing also still needs improvement. "Coffee is a drink made from coffee beans that have been roasted and ground into a powder". The construction of passive voice in the third clause is mistaken. It is written "coffee beans that have been ground" which is supposed to be "coffee beans that have been grounded". The writer also writes fragmented sentences such as: "Because the benefits of coffee itself are to reduce stress and depression, when we are in this state, drinking coffee can instantly improve mood and make things better." The sentence is started by a subordinating conjunction "because" which is not correct to be written at the beginning of a sentence. It is supposed to be in the same sentence with the previous sentence. Another sentence which is also fragmented is: "And the last thing is adding creamer to coffee makes your coffee warm longer." This sentence also is initiated by the word "and" which is not correct to be written at the beginning of a sentence. The last sentence of the essay is: "Coffee will stay warm 20 percent longer when you add creamer to coffee". This last

sentence of the essay is not the same in purpose with the thesis statement which is "drinking coffee can instantly improve mood and make things better."

From the analysis above, it is seen that the student has not mastered how to write an essay. Yet, the ability of the student is improving after she joins the teaching learning process conducted by the lecturer of writing who teaches essay writing using Modified ICT Competency Development Model. The following text is written by the same person after joining the class

The above writing is written by the same person as the previous one after she joins the class which uses modified ICT Competency Development Model. Seen from the text organization point of view, the text is well arranged. It is proven from the thesis statement and the topic sentences that follow it. The thesis statement is: "I would like to tell you the interesting facts of coffee" while the following topic sentences are: 1) The first interesting fact is that coffee is the second largest trading commodity in the world; 2) The third is coffee discovered by a goat shepherd; and 3) The fifth is that Mecca had banned coffee. These three topic sentences are in line with the thesis statement. It can be inferred that the writing has good logic and arrangement.

In the first paragraph, there is a sentence: "Many people like drinking coffee since they think that coffee can improve good mood and reduce stress." The writer has revised the sentence by putting the subordinating conjunction in the middle of the sentence and has used correct grammar. The writing is now error free. The writer has focused her writing only on mentioning the interesting facts about coffee. The concluding paragraph also

represents what is stated in the introductory paragraph.

Focused Group Discussion result

There are several statements asked to respondents. The respondents in this research are the students of the fourth semester learning Essay writing. The statements being discussed in the focused group discussion represent the indicators of the research: the teaching model used by the teacher, logic and organization of the text, language, spelling and grammar, development of ideas, and the purpose of the text.

Excerpt #1:

[Dengan menggunakan model ini, saya tidak tiba-tiba menulis essay, tetapi saya membaca dulu artikel dengan topik sejenis, saya juga mendapat inspirasi dari teman, dan kekurangan saya yaitu tata bahasa dan kosakata terbantu oleh penggunaan aplikasi grammarly]

[By using this model, I do not suddenly write an essay, yet I read several articles first which have similar topic, I am also inspired by a friend when we discuss about the topic and my weaknesses which are grammar and vocabulary are helped by the use of grammarly application.]

When the respondents are asked about whether or not they know that the model implemented by teacher has several steps or not, mostly they know the steps and they also realize that the steps are needed to guide them to write a good essay. The following is one of the excerpts:

Excerpt #2:

The teaching model used by the teacher

The sub-indicators for “the teaching model used by the teacher” are: 1) the model can improve students’ ability in writing essay; 2) the model has several steps; 3) the model has an effect to the students both directly and indirectly. From the focused group discussion done with all of the students joining the research, it can be inferred that almost all of them agree that the modified ICT Competency Development Model is able to improve their ability in writing an essay. This is stated by several students:

Saya tahu beberapa langkah. Pertama kami diminta untuk menemukan setidaknya tiga artikel yang memiliki topik yang sama. Lalu kami diminta membaca artikel itu dan memutuskan apakah akan menggunakannya dalam tulisan kami atau tidak. Lalu langkah berikutnya adalah kami berdiskusi dengan seorang teman mengenai tulisan kami dan bisa saja memasukkan pendapat teman kami ke dalam tulisan kami. Setelah merevisi tulisan kami, langkah selanjutnya adalah menggunakan aplikasi grammarly dan memperbaiki kesalahan-kesalahan pada tulisan kami.

[I know the steps. First is finding at least three articles which have the same topic. Then we are asked to read the articles and decide whether we are going to use the idea in our writing or not. The next step is we discuss with a friend about our writing and we might put the idea from the friend into our writing or not. After revising our writing, the next step is to use grammarly application and edit our writing.]

The next question which is whether the model has direct and indirect effect on the students, one of them says that the effect is they will find out more sources for helping them learn. It is stated as the following statement:

Excerpt # 3

[Dengan mengikuti pembelajaran menggunakan model ini, saya menjadi sadar bahwa bantuan untuk belajar sudah begitu banyak tersedia tetapi selama ini belum saya manfaatkan. Saya hanya perlu mencari tahu lagi sumber-sumber yang bisa membantu saya untuk belajar.]

[By joining the lesson using this model, I realize that there are many helps available but I have not used them. I need to know more sources for helping me learn.]

The last question is regarding the writing quality. Almost all of the respondents agree with the statement that their logic and organization become better after joining the lesson since they have read three other articles and they are sure what idea to write in their writing. When the idea is clear, they can develop the idea well from the

DISCUSSION

The instruments used in this research are field note taken from doing observation, the analysis of the students' worksheet, and the data taken from the focus group discussion attended by the students. The indicators of the students' writing improvement are derived from writing skill scoring rubric taken from the University of Scranton Kania (Minor). From the data that is gained by using the three instruments, it is clear that the implementation of modified ICT Competency Development Model helps students in writing essay.

beginning until the end so the purpose of the text becomes clear, too. For the spelling and grammar, they say that they are helped by the application of grammarly.

The following is one of the excerpts:

Excerpt #4

[Saya merasa sangat terbantu dengan membaca dahulu tiga artikel dengan topik yang sama karena hal itu membuat saya yakin dengan tujuan dari tulisan saya. Saya tahu saya mau nulis apa di setiap paragraf. Jadi menentukan thesis statementnya menjadi lebih gampang. Lalu untuk tata bahasa dan vocabulary, saya terbantu banget dengan aplikasi grammarly karena ternyata saya banyak kesalahan menulis dan juga salah menggunakan tata Bahasa]. [I am really helped by previously reading three articles before starting to write because by doing so, I know the purpose of my writing. I know what I want to write in every paragraph. It makes writing the thesis statement becomes easier. For the grammar dan vocabulary, I am helped by the application of Grammarly because I know that I make many mistakes in writing and in using the grammar.]

The Implementation of ICT Competency Development Model

Students in university level have the need of being able to write well especially in academic context (Ahmad, 2019). That is why the lecturer has to apply effective teaching models to help them master the skill (Mahmood, Mobeen et al, 2020). One of the definitions of effective teaching of writing is stated by Galbraith and Rijlaarsdam (1999) that the model has to: 1) develop writing skill with communicative purposes; 2) develop the ability to coordinate and create different process to produce a piece of writing; and 3) develop

and understand the social context in writing. ICT Competency Development Model has the above characteristics. When the text is understandable and has good organization, the text communicates something. The text can be understood. For criteria number two, the model is also suitable because it has some different processes to produce a piece of writing. The processes are: reading some articles, communicating with a friend, revising, and proofreading the text.

The model is almost similar to several teaching techniques. One of the techniques is SRSD (Self Regulated Strategy Development). The difference is that this model uses the last step which is proofreading. When the idea is good and it is well organized, sometimes students who learn English as their foreign language still make many mistakes in grammar and vocabulary. That is why the step of proofreading especially done by an artificial intelligent is needed. Not only for improving their quality, the use of artificial intelligence is also aimed at making the students more independent in learning (Mahmud & German, 2021).

Another teaching writing strategy is Sensory Details, Figurative Language, and Vivid Words (SFV) (Johannessen, 1995; Manery, 2003; Spencer, 2005). Unfortunately, SFV helps students only to get the idea without trying to help improve the quality of the writing. The same thing happens to Contextual Teaching and Learning (CTL) method (Crawford, 2001). This method does help students to write yet does not touch the grammar and vocabulary problems.

The Students' Writing Quality

Logic and Organization

According to Kaur (2015), students have difficulty in writing a well-organized essay. What it means by a well-organized essay is an essay that is clear, focused, logical, and effective. As it can be seen from the students' writing after joining the teaching learning process using Modified ICT Competency Development Model, the essays have been clear. They are clear because the thesis statement is appropriate and what is mentioned in the thesis statement is also contained in the body and concluding paragraphs. This makes the writing focus, logical, and effective. It can be seen from the essay written by the students

Language

The best performance in the category of language according to the rubric is "employs words with fluency develops concise standard English sentences, balances a variety of sentence structures effectively." One of the problems faced by students is lack of vocabulary. This is also confirmed by the research conducted by Salikin and Tahir (2017). Yet, in the final draft of the essay written by the students, they can show the use of variety of sentence structures and the grammar is correct. This is probably done not by their own but by the assistance of the artificial intelligence used at the stage of 'proofreading'. Without the help of AI, students will find difficulty in using language since students' lexical diversity is still low (Malvern, Richards, Chipere, & Durán, 2004). Besides lexical diversity, students also need to be helped by the use of AI since their lexical sophistication also needs to be assisted. Lexical sophistication is the use of not frequent words in the students' writing (Malvern et al., 2004). For students who are

non-native speakers, having good lexical sophistication is something hard master. There are many helps actually to make the writing has lexical sophistication, but not all students are aware with the helps.

Spelling and Grammar

“The writing is essential error free in terms of spelling and grammar.” This is the best criteria for the spelling and grammar. According to the students’ opinion in the FGD session, the grammar and spelling are perfect since they are checked by the artificial intelligence. This AI is very helpful since spelling and grammar are still very important factors in writing. Even, Vögelin et al. (2019) reported that some teachers still judge the whole students’ writing from the writings’ grammar and spelling. When there are many spelling and grammar errors, it is almost predictable that the score must be low. Spelling and grammar are important but the idea or the content also need to be considered. This fact strengthens the reason that using AI to check grammar and spelling is important. At least students lose one of the technical burdens and can concerns more on the idea.

Development of Ideas

It is fabulous when a students can explore ideas vigorously, support points fully using a balance of subjective and objective evidence, reasons effectively making useful distinctions. Developing ideas is not easy when the students do not read much. The students’ writings, before they join the class which modified ICT Competency Development Model is implemented, are not well developed. The writing in the first paragraph does not have anything to do with the second etc. Many studies have used various media such as social media such as Twitter (Davis &

Roger, 2011), short message services (Dansieh, 2011), and some other media. These are used to make students gain ideas to be developed in their writing. In this model too, students are guided to read and use the idea that they can find from the internet. This idea hunting is placed as the first step which is ‘accessing’. In the step of accessing, the students are asked to look for some references before they start writing.

Purpose

Hayes and Flowers (1980) says that writing is seen as a process to solve problems in which ideas are built to create a communicative purpose. When it is to communicate, the purpose has to be clear so that the message can be conveyed and the readers can understand the purpose of the writing. Thus it is important that the writer has to decide the focus, organization, style, and content fully elucidates the purpose and keep the purpose at the center of the place. As it can be seen from the pieces of writing of the students after joining the class with Modified ICT Competence Development Model, the pieces of writing are more focused. The purpose is clear. What it is stated at the thesis statement is rewritten in the concluding paragraph.

CONCLUSION

The study described here investigates to what extent ICT Competency Development Model containing the steps of: accessing, understanding, processing, integrating, communicating, evaluating, and creating issued by UNESCO which is modified by the researchers by adding one more step which is proofreading can influence students’ writing skill. The result of the study shows that the model influences the students’ writing skill quite significantly in the points of view of: logic and

organization, idea development, language, spelling and vocabulary, and purpose. This study has several limitations. The first limitation is that the scope is still narrow which is only in one class. The researchers suggest that the next research can be conducted with more participants. Another shortcoming is that the model has not been This research is funded by Lembaga Pengelola Dana Pendidikan (Education Fund Management Institute) of the Ministry of Finance of Republik Indonesia.

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