

Developing Students' Writing and Digital Literacy using Weblog at Tridianti University of Palembang

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Abstract

Today, we live in a dynamic digital world where both educators and students are challenged with the ever changing technological developments. Thus, this research was aimed at investigating the development of students' writing and digital literacy through weblog. The sample of the study was 20 students of the fourth semester English study program of Tridianti University Palembang. The researchers used purposive sampling as the way of choosing the sample because the sample is taught by the researchers in writing class. The researchers applied quasi-experimental design in term of pretest-posttest non equivalent group design. Moreover, there are three types of data collection used by the researchers; they are test, questionnaire and observation. After the study, it was found out that the results of posttest between experiment and control group show significant difference with t value of posttest was 11.739, sig 0.000 while t value of gain score was 7.671, sig 0.000. Accordingly, all aspects of writing both posttest and gain score show significant differences. Furthermore, it was also found that the developments of digital literacy components from the highest to the lowest are as follows: 1) information sources (36%), 2) digital competencies (23%), 3) attitude and perspective (24%), and 4) basic ICT skill (17%). The results indicate that the concept of digital library in this study encouraged students' knowledge about information sources. The highest progress made by the students from the observation results was in students' basic ICT skill then followed by digital competencies because the number of the students who were in excellent category was almost or closely above 50% for these two components. Meanwhile, though attitude and perspective and information sources also increased still they were not as high as other two components as there was only small number of the students who were in excellent category. The results reveal that weblog is effective to develop students' writing and digital literacy. In addition, students showed positive views because using blog was very interesting and it provided more cooperation between lecturer and students.

Keywords : weblog; ICT; writing literacy; digital literacy.

Abstrak

Saat ini, kita hidup di dunia digital yang dinamis di mana dosen dan mahasiswa ditantang dengan perkembangan teknologi yang terus berubah. Dengan demikian, penelitian ini bertujuan untuk menyelidiki perkembangan tulisan mahasiswa dan literasi digital melalui weblog. Sampel penelitian ini adalah 20 mahasiswa dari program studi bahasa Inggris semester empat Universitas Tridianti Palembang. Para peneliti menggunakan purposive sampling sebagai cara memilih sampel karena sampel diajarkan oleh para peneliti di kelas menulis. Para peneliti menerapkan desain quasi-eksperimental dalam hal desain kelompok non-setara pretest-posttest. Selain itu, ada tiga jenis pengumpulan data yang digunakan oleh para peneliti; mereka adalah tes, kuesioner dan observasi. Setelah penelitian, ditemukan bahwa hasil posttest antara eksperimen dan kelompok kontrol menunjukkan perbedaan yang signifikan dengan nilai t postes adalah 11,739, sig 0,000 sedangkan t nilai skor gain adalah 7,671, sig 0,000. Dengan demikian, semua aspek penulisan posttest dan gain score menunjukkan perbedaan yang signifikan. Selain itu, juga ditemukan bahwa perkembangan komponen literasi digital dari yang tertinggi ke yang terendah adalah sebagai berikut: 1) sumber informasi (36%), 2) kompetensi digital (23%), 3) sikap dan perspektif (24% , dan 4) keterampilan dasar TIK (17%). Hasil menunjukkan bahwa konsep perpustakaan digital dalam penelitian ini mendorong pengetahuan mahasiswa tentang sumber informasi. Kemajuan tertinggi yang dibuat oleh mahasiswa dari hasil pengamatan adalah dalam keterampilan TIK dasar mahasiswa kemudian diikuti oleh kompetensi digital karena jumlah siswa yang berada dalam kategori sangat baik hampir atau hampir di atas 50% untuk dua komponen ini. Sementara itu, meskipun sikap dan perspektif dan sumber-sumber informasi juga meningkat, namun tidak setinggi dua komponen lainnya karena hanya ada sedikit mahasiswa yang berada dalam kategori sangat baik. Hasil penelitian menunjukkan bahwa weblog efektif untuk mengembangkan tulisan dan literasi digital mahasiswa. Selain itu, mahasiswa menunjukkan pandangan positif karena menggunakan blog sangat menarik dan memberikan lebih banyak kerja sama antara dosen dan mahasiswa.

Kata kunci : weblog; TIK, literasi tulisan; literasi digital

1. Introduction

Information and communication technologies (ICTs) have penetrated all areas of contemporary life. In this context, digital literacy has become much more than the ability to handle computers – just like traditional literacy and numeracy, it comprises a set of basic skills which include the use and production of digital media, information processing and retrieval, participation in social networks for creation and sharing of knowledge, and a wide range of professional computing skills. Digital literacy improves employability because it is a gate skill, demanded by many employers when they first evaluate a job application.

Literacy skills have always been important. In centuries past, people communicated via letters. These letters soon turned into telegraph messages. From there people advanced to the telephone, internet and then text messaging via a phone. Today's options for communication far outweigh the one or two of generations' pasts. Students today learn in ways that their teachers could not even imagine decades ago when they were in school. Students learn technology just like they do the spoken language, by doing and today it is not uncommon for a 3 year old to have some basic knowledge regarding how to get on to the computer and load a game (hopefully educational). The way students learn and their abilities to showcase their learning has surpassed the years of book reports and posters representations.

Today, we live in a dynamic digital world where both educators and students are challenged with the ever changing technological developments. As a result, there is a growing need for developing the digital skills, especially for English literacy skill as a basic requirement for the students' academic and professional advancement. In Indonesia, EFL literacy of Indonesian students is still low. Diem (2011) reveals that English literacy achievement of the students is still below the standard score. This study finds out that mean score of students' English literacy in South Sumatera was 54.77. Moreover, insufficient exposure to English also contributes to students' poor performance in English writing literacy skill. As the result, many non-standard sentences commonly appear in most of Indonesian students' scientific writing as they are affected by local languages and various forms of other nonstandard language usage (Kholiq & Ningsih, 2011). Moreover, Alfaki (2015) reveals that university students have various writing problems; they are language problems at the levels of morphology and syntax; usage errors, and mechanical mistakes, that is, spelling, punctuation and capitalization, lack of several writing development skills, cognitive problems and graph motor problems.

Based on some problems above, this study focused on report text. Gerrot and Wignell (1994:196-197) state that report is a text which functions to describe the way things are, with reference to a range of natural, manmade and social phenomena in our environment. A report presents information about a subject. It is a result

of an observation and analysis. Within writing report text, students have to write something decent to report by researching and analyzing something.

Moreover, an abundance of information resources available on the web is mostly found in English. It becomes invaluable treasure to solve some literacy learning problems. These collections of information sources are accessible via computers. Therefore, in this digital information era, students need to possess digital literacy skill and one of them is weblog. According to Pinkman (2005) blogs can provide interesting, authentic and communicative resources that can serve a variety of purposes in language classroom and they can also be used to encourage interaction among students and between teachers and students (Yang, 2009).

Furthermore, Kohsamut and Sucaromana (2017) reveal that students significantly performed better scores on English writing ability after being taught through blog. Through weblog, learners have the opportunity to read other learners' posts and comment or add some materials to the existing articles. This interaction makes students motivated in learning, while provides a competition for learning with other learners. Since the Internet is the only place that users can access to different sources and skills simultaneously, it is observed that students can improve their language learning (Noytim, 2010).

Furthermore, some previous studies agree that weblog was effective to motivate students to write and change classroom environment. (Wu, 2006). Mynard (2007) also said that the implementation of blogging strategy in writing class could be a tool to encourage students to reflect on their learning). Blogs are considered powerful and useful if the use is maximized to meet teachers' and students' needs. The benefits are obvious for the teachers of EFL as well as for the students who want to enhance their performance in the English language skills and components, especially writing. Additionally, Huffaker (2004) explains that learners can gather in one site of weblog site where ideas are shared, questions are asked and answered, and social cohesion is developed. Those activities create collaborative learning among students. Besides, a case study conducted by Jun and Pow (2011) find out that web-based learning was useful in involving students in digital literacy practices.

Therefore, the researchers would like to find out if using Weblog will affect students' writing and digital literacies. For this reason, based on all the description above, the writers are interested in conducting the research which discusses "Developing Students' Writing and Digital Literacy Using Weblog at Tridinanti University of Palembang."

A. Research Questions

Based on the above-stated background, the research questions were formulated as follows:

1. Was there any significant difference in writing literacy between the students who were taught by using weblog and those who are not?

2. Was there any significant difference in digital literacy between the students who were taught by using weblog and those who are not?

B. Objectives of the Research

In relation to the problems above, the objectives of this research could be formulated as follows:

1. To find out the significant difference in writing literacy achievement between the students who were taught by weblog and those who were not.
2. To find out the significant difference in digital literacy between the students who were taught by weblog and those who were not.

C. Research Hypotheses

In conjunction with the problems and objectives of the research, the researchers proposed hypotheses as follows:

Null Hypotheses (H_{01}): There was no significant difference in writing literacy between the students who were taught by weblog and those who were not.

Alternative Hypotheses (H_{a1}): There was significant difference in writing literacy between the students who were taught by weblog and those who were not.

Null Hypotheses (H_{02}): There was no significant difference in digital literacy between the students who were taught by weblog and those who were not.

Alternative Hypotheses (H_{a2}): There was significant difference in digital literacy between the students who were taught by weblog and those who were not.

D. Research Methodology

In this study, the researchers used quasi-experimental design in term of pretest-posttest non equivalent group design. The students of experimental group got the treatment intensively by using weblog for 10 meetings so that there were 20 meetings in this study including pretest and posttest. Each of which consisted of 2x50 minutes. It took two teaching period for each meeting due to various goals that need to be achieved. Besides, it was more conducive to complete the whole learning procedures of this strategy within 100 minutes in each meeting.

E. Population and Sample

The population of this research was all the fourth semester students of English study program of Tridianti University of Palembang in the academic year of 2017- 2018. The researchers used purposive sampling as the way of choosing the sample because the sample is taught by the researchers in writing class. The sample of the reseach can be seen in Table 1 below.

Table 1. The Sample of Research in the Experimental and Control Group

No.	Group	Total
1.	Experimental Group	10
2.	Control Group	10

F. Procedures of Weblog

Teaching and learning process of the experimental group was conducting through following three main activities, namely: pre-activities, whilst activities, and post activities. Before teaching and learning process was started, there were three things that had been done: (1) Each student had made their own blog guided by the lecturer, (2) Lecturer had created class blog, and (3) all students had followed class blog and all experimental students' blog.

The steps of teaching and learning activities can be described as follows:

1. Pre-activities (20 minutes)
 - a. Lecturer introduced the topic of each meeting.
 - b. Lecturer and students visited class blog.
 - c. Lecturer and students browsed and read selected materials (report text) from the links that had been embedded on class blog.
2. Whilst activities (60 minutes)
 - a. Lecturer read one post from class blog about certain topic in each meeting while explaining about aspects of writing.
 - b. Lecturer asked students to brainstorm or get the ideas about the same topic.
 - c. Lecturer wrote a paragraph about report text with group/peer/individually (drafting process).
 - d. Students posted their first writing draft on their blog.
 - e. Students gave comments on each other's works (responding process).Students did self-editing on their works (revising and editing process).
3. Post-activities (20 minutes)
 - a. Students published their revision or final draft in the comment column of class blog (post- writing).
 - b. Lecturer and students had small discussion about their works.

G. Data Collection

In collecting the data, there were three data collection. They were test, questionnaire and observation.

For Writing test, students asked to write a paragraph of report text for writing literacy test in both pretest and posttest to identify the progress made by students before and after the study. There were seven aspects measured. They were (1) tone, (2) opening sentence, (3) supporting sentences, (4) closing sentence, (5) organization ideas, (6) vocabulary or word usage, and (7) spelling, capitalization, and punctuation.

For Digital literacy questionnaire, it was used to measure students' digital literacy improvement. Therefore, the questionnaire was given twice; in pretest and posttest in experiment and control group.

Moreover, In order to obtain clear information about the students' digital literacy progress, **observation** was done by the researchers themselves during the intervention in experimental group. It was needed to report more specific information about daily progress in all components of digital literacy skill. Therefore, checklists used for observation guideline were similar to digital literacy questionnaire items.

H. Validity and Reliability

In relation to pursuing a high degree of content validity, the researcher used tests to measure the students' writing and digital literacy achievements. In order to know whether the topic of writing tests given were valid; the researcher formulated the topic for writing tests by considering English textbook used by the concerned lecturer. Meanwhile, in order to figure out the reliability of the test, inter-rater reliability was used.

I. Data Analysis

The data analyses were taken from the tests. In analyzing the data of students' writing and digital literacy achievements, the rubrics were used and the writer used the Paired Samples T-test in which the data were analyzed by SPSS 20 program. It was used to know the significant difference between pretest and posttest for each group, the Independent Samples T - test was applied to know the significant difference between the two groups.

The results of writing tests were calculated using scoring system ranged 0 to 100. Then, they were categorized based on levels of achievement using score interval as follows:

86 - 100	: Very good
71 - 85	: Good
56 - 70	: Average
41 - 55	: Poor
0 - 40	: Very poor

Meanwhile, scoring rubric was used to measure the improvement of digital literacy through observation. The observation scoring rubric is presented in Table 2 below:

Table 2. Observation Scoring Rubric

Score Range	Category	Explanation
4	Excellent	Confident and need no support or training
3	Good	Workable knowledge, but need more practice
2	Poor	Small amount of knowledge, but not confident, improvement needed
1	Failed	No knowledge of this area

2. Findings and Discussion Descriptive Analyses

The scores of writing and digital literacy from the whole sample were categorized into 5 levels of achievement. The results revealed that both writing and digital literacy achievements were categorized into good level, with the mean of 80.15 for writing and 79.21 for digital literacy. In detail, the condition of students' writing literacy achievement, 8% was in very good, 44% was in good, 19% was in average, 29% was in

poor and no student was in very poor. Then, digital literacy achievement showed that 70% was in very good, 26% was in good, 4% was in average, and no students was in poor and very poor level.

A. Statistical Analyses

The statistical analyses were used to know whether or not there were any significant improvements and significant difference on the students' speaking and writing achievements after giving a treatment by using weblog. To find out the answer of the research questions, the researchers used two statistical analyses in this research namely Paired sample t-test and Independent sample t-test. **Paired samples t-test** was used to find out:

(1) the significant development on the students' writing and digital literacy skill achievements before and after they were taught by using weblog. **Independent samples t-test** was used to find out: (1) the significant difference on the students' writing achievement between the experimental group and control group; (2) the significant difference on the students' digital literacy achievement between the experimental group and control group.

B. Writing Literacy Result

In writing literacy, the mean difference was 30.10, t value = -13.961, and sig. = 0.000. Compared with control group, it had not made significant improvement with mean difference only 4.23, t value = 1.627, and sig. = 0.120. Then, for seven aspects of writing, experiment group also show significant improvement in all aspects with the order from the highest to lowest results as follows: (1) closing sentence; mean difference = 45.35, (2) Tone; mean difference = 32.50, (3) opening sentence; mean difference = 27.38, (4) supporting sentences; mean difference = 28.65, (5) organization idea; mean difference = 26.86, (6) vocabulary or word usage; mean difference = 20.68, and (7) spelling, capitalization and punctuation; mean difference = 18.88. But in control group, improvement only occurred for closing sentence with mean difference = 11.68, while other 6 aspects did not. The score of mean difference of those aspects were explained respectively: for supporting sentences and vocabulary or word usage were 5.15, organization idea was 2.35, for opening sentence and spelling, capitalization and punctuation were 2.35, and tone was 2.45.

Besides, the results of posttest and gain score between experiment and control group show significant difference with t value of posttest was 11.639, sig 0.000 while t value of gain score was 7.571, sig 0.000. Accordingly, all aspects of writing both posttest and gain score show significant differences.

C. Digital Literacy Result

From the result of digital literacy questionnaire, it was found out that digital literacy of experiment group show significant improvement with mean difference 14.36, t value = -6.283, sig. = 0.000. It is different from

control group which did not make any significant improvement because the mean difference score was only 0.74 with t value = -0.499 and sig. 0.623. Meanwhile, the aspects of digital literacy of the experiment group had the highest significant improvement in information sources with mean difference 29.67, the second was digital competence with mean difference 17.78, the third was attitude and perspective with mean difference 16.79, and at last it was basic ICT skill with mean difference 12.19. Meanwhile, those aspects did not significantly improve in control group because mean difference achieved by the students were very low. Mean difference of digital competence was 3.76, mean difference of basic ICT skill was 0.79, mean difference of information sources was - 1.25 and mean difference of attitude and perspective was -4.58. Moreover, there were also significant differences between experiment and control group in terms of the posttest result with t obtained = 4.731 and sig. 0.000 and gain score with t value = 4.767 and sig 0.000.

D. Correlation Analyses between Digital Literacy Questionnaire and Observation

Digital literacy development of experiment group was measured by using questionnaire and observation. In order to see whether the results from both instruments were significantly correlated, they were analyzed by using Pearson correlation. It was found out that there were positive significant correlations between the result of digital literacy questionnaire in posttest of experiment group and the result of observation since the probability values of each components were lower than the alpha level of 0.01. The results were explained as follows: 1) $r = .838$ and $p = .000$ for digital literacy (total), 2) $r = .567$ and $p = .009$ for Basic ICT skill, 3) $r = .838$ and $p = .000$ for information sources, 4) $r = .625$ and $p = .003$ for digital competencies, and 5) $r = .627$ and $p = .003$ for attitude and perspective.

E. Observation Results

During the study, the students in experiment group were observed while they were doing digital learning practices. There were 4 components which were observed; 1) basic ICT skill, 2) information sources, 3) digital competencies, and 4) attitude and perspective. For basic ICT skill, it was observed while the students were operating their ICT tools (computer, laptop, mobile phone or tablet). Meanwhile, information sources and digital competencies were observed from the results of the students' work which were posted on the blog. Then, their attitude and perspective about digital learning were observed from the students' response to the given task.

As a whole, students made progress for all items of the four digital literacy components. It can be seen from excellent and good category which increased from observation 1 to observation 3.

At the beginning of the study, there was very small number of the students who were in excellent and failed

category. Most of them were in good and poor category. In the middle of the process, failed and poor category decreased and vice versa good and excellent category increased. Then, at the end of the study, none of the students was in failed category anymore, only few students (5%-15%) in few items were in poor category, around 50% students in all components had good category, above 50% students in some items were in excellent category.

In addition, when the results were seen in detail, the highest progress made by the students from the observation results was in students' basic ICT skill then followed by digital competencies because the number of the students who were in excellent category was almost or closely above 50% for these two components. Meanwhile, though attitude & perspective and information sources also increased still they were not as high as other two components as there was only small number of the students who were in excellent category.

F. Discussion

In accordance with the above findings, based on the results of the descriptive analyses, the condition of English writing literacy and digital literacy achievements were in good level. However, the statistical analyses show that the students of experiment group made significant improvement in each literacy skills while the students of control group did not. Furthermore, there were significant differences in terms of posttest and gain score between experiment and control group. Thus, focusing on experimental students' improvement, there are three important points that need to be discussed: (1) interpretation on writing literacy, and (2) interpretation on digital literacy.

G. Interpretation on Writing Literacy

From the result of test, it can be concluded that that weblog is effective to develop students' writing skill. Besides, the improvements in all aspects of writing indicate that writing performance of the students in this study was getting better. In each meeting, students tend to upload better post on their blogs before revising by others. As the result, the quality of the content also developed well. This research was in line with the research done by Akdağ and Özkan (2017) who said that blog was effective tool for students to improve their English writing skills.

In detail, the development is as follows: 1) closing sentence (23%), 2) tone (16%), 3) opening sentence (14%), 4) supporting sentences (14%), 5) organization idea (13%), 6) vocabulary or diction (11%), and 7) spelling, capitalization and punctuation (9%). The results reveal that during writing process, students tend to be more focus on the content of their writing than mechanics like spelling, capitalization and punctuation. Furthermore, closing sentence was highly significant improved because most of the students did not include closing sentence in their writing pretest. They did not conclude their writing at all. It means that at the beginning of the study, students' knowledge about

writing aspects was still very poor. Having been taught about parts of a paragraph, they already knew about those aspects then applied them on their writing product. Thus, not only closing sentence but also opening sentence and supporting sentences gained high improvement in their final result.

H. Interpretation on Digital Literacy

The result from questionnaire and observation show that digital literacy skill of experiment students significantly improved. It means that weblog not only successful in improving students' ability using digital tool properly but also appropriate to develop their ICT skill, increase the knowledge about getting information sources, enhance their digital competence and build positive attitude and perspective about digital usage and transformation.

The development of digital literacy components from the highest to the lowest are as follows: 1) information sources (36%), 2) digital competencies (23%), 3) attitude and perspective (24%), and 4) basic ICT skill (17%). The results indicate that the concept of digital library in this study encouraged students' knowledge about information sources. Knowing collections of information which are free and accessible via internet very benefited EFL learners to be exposed to learning materials which relevant to the real situation of target language.

In addition, students also show positive attitude and perspective about digital use and digital transformation towards this approach. There were some factors that might cause these improvements. Students became curious, motivated, got involved and interested in this digital learning process. Besides, they could be more innovative and creative in solving their task and problem in EFL learning. Lastly, students' basic ICT skill also improved though its improvement was the lowest. It happened because most students already had good ICT skill at the beginning of the study. Luckily, this condition supported the success of improving other digital literacy components. Besides, as most students were already good in basic ICT skills, their concerned was not only on technical skill anymore but also on problem solving skill with the use of digital tools.

3. Conclusion

Based on the results and interpretations of the study, there were some important points that can be concluded. They are as follows:

1. Weblog was appropriate to develop students' writing literacy. The improvements were as follows: closing sentence (23%), tone (16%), opening sentence (14%), supporting sentences (14%), organization idea (13%), vocabulary or diction (11%), spelling, capitalization and punctuation (9%).
2. Weblog was also effective to develop digital literacy as it was found that there was significant improvement of the students who were taught by using weblog as well as its all aspects. Besides, those

improvements were significantly different from the students who were not taught by using. The improvements achieved by experiment students were as follows: information sources (36%), digital competencies (23%), attitude and perspective (24%), and basic ICT skill (17%).

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