

Investigating The Use Electronic Portfolio Assessment and Student's Language Attitude in Writing Descriptive Text To Indonesian Students

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Abstract

The present study attempted to investigate the impact of electronic portfolio assessment and paper-based assessment on students' writing and to find out the student's language attitude toward the use of electronic portfolios in writing assessment. A quasi-experimental method of the pretest-posttest control group was used. The experimental class received the treatment which was employing the electronic portfolio, while the control group had the paper-based assessment. At the end of study, the N-gain scores of the pretest and the posttest of both classes were obtained and the results were statistically analyzed using an independent t-test. The finding showed the significance of the experimental and control group. The language attitude questionnaire which was distributed to experimental class showed that the student had a positive attitude toward the use of electronic portfolios. On the basis of finding, it is recommended that the electronic portfolio assessment be used in writing skills.

Key Words: *electronic portfolio assessment, writing, language attitude*

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I. Introduction

A testing way cannot be separated from the learning process. Dynamically, with the growth of English Second Language (ESL) teaching, traditional assessment is applied by most language instructors. The recent development and the demand in society also affected the change in education. Recently, in Indonesia, the conceptual framework of curriculum and instructional development has been modified into more student-centered communicative approaches in the classroom. Especially theories such as constructivism and multiple-intelligence and new social trends such as changing labor market, and information-age needs engendered a radical change in traditional approaches to learning, teaching and assessment (Birgin & Baki, 2007).

The point of assessment mostly stressed in the latest curriculum in Indonesia is having point in performance assessment which refer to authentic assessment. O'Malley and Pierce (1996) cited by Afrianto (2017) described the authentic assessment as the multiple forms of assessment reflecting students' learning, achievement, motivation, and attitudes toward classroom instructional activities. Afrianto adds that the term assessment is the synonym of other terms, like scoring, measurement, testing, or evaluation; meanwhile, the term of authentic has a similar meaning as original, real, valid, or reliable. Thus, the use of authentic assessment is presumed to enable teachers to get valid and reliable data on students' learning progress and achievement.

Portfolio Assessment in Writing

Portfolio assessment is one of the authentic assessments as Brown (2004) cited by (Sahyoni, 2017), authentic assessment has six types, they are (1) performance-based assessment, (2) portfolio, (3) journal, (4) conference and interview, (5) observations, (6) self and peer-assessment. Sahyoni (2017) adds that those types of authentic assessment are authentic and real-life experience for students.

The definition of the portfolio has been used for different purposes and may change according to the purposes of the user or the usage. The portfolio may be interpreted as a collection of works on related material that has been collected over a period of time as Afrianto (2017) states that a portfolio is formed from a systematic collection of students' works that are analyzed to show the student's progress over time regarding to instructional objectives.

Writing is one of the four skills –LSRW (listening, speaking, reading, and writing) in language learning (Durga & Rao, 2018). Among the four skills, writing is considered as challenging skill as the need to master writing has a complex process as Hamp-Lyons (2003) state that writing is a very complex activity involving

thinking, planning, organizing, and linking as well as the several levels of language manipulation such as sentence and clause level as well as phrase level, plus spelling, punctuation, etc.

In assessing the writing task, the examiner's measurement and opinion are used to measure whether the writing's work is in high or low level, this is caused the writing is usually called a subjective test. The portfolio assessment helps the instructor to maintain the student's writing continuously as Song & August (2002) mentioned that in a portfolio assessment program, while planning portfolio task and lesson coaching student on drafts, and helping them compile portfolio can be comfortably folded into a process-oriented course, the actual evaluation of portfolios is inevitably labor-intensive, requiring a significant amount of time from instructors.

Electronic Portfolio

As cited by Birgin & Baki (2007) that Melograno (2000) classified portfolio assessment into nine types: personal portfolio, working portfolio, record-keeping portfolio, group portfolio, thematic portfolio, integrated portfolio, showcase portfolio, electronic portfolio, multilayer portfolio. Portfolio assessment itself is the online saved works of student that can be reviewed anytime, as Barret (2006) used the term electronic portfolio when it refers to the use of technology providing media types (audio, video, graphics, text) as the container that allows students or teachers to collect and organise the portfolio artefacts.

Language Attitude

Numerous factors affect the fluency of English learning, including internal factors as well as external factors. The external factors can refer to such situation, input, social class, first language, curriculum, etc (Mahmoudi & Mahmoudi, 2015). Meanwhile, according to Muftah (2017), the internal factors such as age, motivation, attitude, personality, cognitive style, and learning strategy have an influential role in the acquisition of the English Language.

Attitude could be integrated into language learning because it may influence their performance in acquiring the target language. Students' language attitudes, such as feelings, beliefs, likes, dislikes, and needs should be considered as the factors which affect the achievement in learning since their attitudes influence language learning as Dornyei and Skehan (2003) stated that learner attitudes toward language variation are also believed to influence levels of proficiency in the L2 as cited in McKenzie (2010). Specifically, Graham et al. (2007) defined attitude toward skill as writing attitude which is an effective disposition involving how the act of writing makes the author feel, ranging from happy to unhappy.

Nowadays, with the rapid development of science and technology in 21 century, which people call as millennial era, the use of information and communication technology for language teaching is a challenge to be considered by language teachers in Indonesia. Further, blended learning, the practice of combining face-to-face instruction with online learning experience (Broke, 2020), which uses various electronic platforms had been beneficially used by teachers in teaching. Additionally, since pandemic Covid-19, it change the way of learning the use of technology and the internet is increased. Therefore, the researcher proposes to use an electronic platform for blended learning while assessing.

Since online learning is applied in this pandemic era, teachers reported that students' behavior in learning has slightly different before the pandemic era, students tend to learn reluctantly and are irresponsible. The research about the using portfolio or E-portfolio assessment had been deemed to be a valuable type of assessment relating its effects had been carried out. Moreover, the exploring in psychological dimension on the skill, in this case, writing skill assessed with portfolio assessment is still limited in first level, especially in Indonesia. Therefore, in this research, the researcher observes the learning process using an E-portfolio assessment in order to identify whether the use of E-portfolio has an impact on the students. Moreover, the research mainly focuses on investigating the student's attitude towards the use of E-portfolio assessment in the learning process of the writing classroom.

II. Previous Research Overview

The first is the research conducted by Khodashenas & Rakhshi (2017) who administered an experimental study with the purpose to find the impact of electronic portfolio assessment on writing performance of Iranian EFL learners. This study was administered to all the 30 available students who took part in a TOEFL preparation course in Shokouh Language Institute of Mashhad. They were randomly divided into experimental and control groups. An advanced writing course to be prepared for the TOEFL is tough both experimental and control group. Further, traditional methods of teaching and assessing writing are implied in control group, while the Telegram channel is used in experimental group.

The findings revealed that the participants of the experimental group outperformed those of the control group and thus it was concluded that electronic portfolio assessment can improve the writing ability and can be considered a motivating assessment strategy.

Another study was conducted by Warni (2016). She investigated how online portfolios as part of ICT (Information and Communication Technology) tools could be used to facilitate the learning of EFL writing in an Indonesian EFL writing class. The platform she used in implementing the online portfolio is a blog. The study revealed that online portfolios have been beneficial in developing students' EFL writing skills. The research is conducted through action research and also involve questionnaires, interviews, teacher's reflective journals, and an analysis of online portfolio entries as method for generating data. Besides knowing the effect of how online portfolio impact in student's writing, she also evaluated the learner autonomy and motivation.

Both study above was the study related the electronic portfolio, here is the study by Cepik & Yastibas (2013) dealt with the electronic portfolio assessment in speaking, while finding the effect of e-portfolio, they also examine student's attitude toward using it. The findings showed that e-portfolio is effective in Turkish EFL learners speaking skills while students' attitudes towards the use of e-portfolio in speaking are positive student's thought that e-portfolio could improve their speaking in terms of grammar, pronunciation, and vocabulary and also the use of e-portfolio can improve student's technology skill.

Cepik & Yastibas (2013) conducted the qualitative research use analysis content in analyzing. The participant is university student which consists of 17 students in English Language Preparation Department. The *www.lore.com* is used as the platform for speaking portfolio in collecting the data and also the interview was carried out and finding the student's attitude is not the primary objective in this study.

As the following reviews above, the use of e-portfolio claimed beneficial to improve student's writing and speaking, and showed the positive at student's attitude, yet in writing skill, thus the current research will explore the student's attitude in writing.

III. Objectives of the Study

The students face many challenges in writing, besides that, the condition provides them to change. A new style of learning can affect the students' believe about the things around them including the learning itself. The use of electronic portfolio assessment on student's writing will have positive impact to the student's writing ability. Thus, this study is aimed to answer the following questions:

1. Is there any statistica- difference of students taught by electronic portfolio assessment and by paper based assessment on the first-grade student at SMA Muhammadiyah Plus 1 Natar?
2. What is student's attitude toward using the E-portfolio assessment in writing descriptive at SMA Muhammadiyah Plus 1 Natar?

IV. Methodology

This quantitative research is quasi-experimental research. In order to answer the research questions, nonequivalent pretest-postest group design is used to know the different result of their writing. Therefore, in conducting the research, the experimental (G1) and control group (G2) will be applied. Both experimental and control group will be taught to write descriptive material, but the experimental group will be assessed using electronic portfolio. Then there will be test before and after the treatment to the students. The test before the treatment or pretest (T1) is given to know their first performance in writing before treatment, while the posttest is given to know the differences of their performance after giving treatment. According to Setiyadi (2018), the following pattern can be formulated as follows:

G1: T1 X T2
G2: T1 O T2

where,

G1 : Group 1 (Experimental Group)
G2 : Group 2 (Control group)
T1 : Pre-test
T2 : Post-test
X : Treatment (E-portfolio)
O : treatment (paper based)

Subjects

In this research, the population of this study are all the students of first grade of Muhammadiyah Senior High School 1 of Natar. There are two classes of first grade in this school. The amount of the students of both classes is 24 students. In line with the current study, both classes is used to be experimental class wich consist of 12 students and control class which consist of 12 students. The school is chosen as the research place because the school can be applied the blended learning for the learning activities due to this pandemic era during second semester.

Instruments

1. Writing test

The researcher will conduct the writing test both pre-test and post-test and will be applied in experimental and control group. They will require to write the descriptive related to the topic given.

1. Questionnaire

In this present study, the researcher adopted the Yang's questionnaire to be fit in the need of the present study. The questionnaire used in present study is a modified version from Yang (2003) which also investigating the student's attitude on portfolio.

Data Analysis Procedure

This quantitative study used a quasi-experimental, nonequivalent pretest/posttest design for measuring the student's writing achievement and attitude toward the use of e-portfolio.

1. For the first research question, the result of pretest-posttest, both experimental and control group whose scored by the researcher and second-rater is gained. These are two formulas that were used in getting score from first rater and second rater:

$$R1 = C + O + LU + V + M$$

$$R2 = C + O + LU + V + M$$

After that, in order to know total score measured by researcher and second rater, this formula is used:

$$TR = \frac{R1 + R2}{2}$$

Where: R1 = Rater 1

R2 = Rater 2

TR = Total Score

The result of N-Gain between the pretest and posttest scores in control and experimental classes is used to avoid the subjective researcher conclusions. The comparison of normalized gain values (N-Gain) between the experimental and control classes can be calculated by this formula:

$$g = \frac{S_{posttest} - S_{pretest}}{S_{maximum} - S_{pretest}}$$

The criteria are:

g > 0,7 : high
0,7 > g > 0,3 : average
g < 0.3 : low

The data then tabulated into SPSS program to be analyzed using Independent Group T-Test.

2. As the second research question, the validity of the questionnaire is measured using Pearson Product Moment, and reliability is measured using Cronchbach Alpha then descriptively explain the language attitude of student related the use of e-portfolio in writing. After the data was collected, the next procedure was tabulate the student's questionnaire based on the four categories. Then, researcher calculated the percentage index of student's response by following formula:

$$P = \frac{F}{N} \times 100$$

where:

P= Percentage student's response

F= Frecuency of student answer

N= Total respondents

After getting the percentage of students score in each categories, the next was make a final score by calculate the maximal score and gained score. The max score was gained by following formula:

$$\text{Max score} = N \times Y$$

where:

N : total number of respondents

Y : higher score of Likert Scale used

Meanwhile, for the gained score, the score is gained by this following formula:

$$GS = n \times r$$

where:

GS : Gained score

N : range of scale score

After getting the percentage of final score, then classified the percentage of final score based on classification used by Sepyanda (2018) below:

Table 1.1 The Classification Level of students Attitude

Interval of Frecuency of Student's Attitude	Classification Level
81% -100%	Very Positive
61% - 80%	Positive
41% – 60%	Average
21% - 40%	Negative
0% - 20%	Very Negative

V. Result and Discussion

For the first research question, after administrating the homogeneity test to 12 students, the statistics data was obtained. Table 1.2 showed the descriptive statistics of homogeneity test. the significant level showed .116 comparing to the P-value (*Sig.*) > 0.05, thus it indicates that the test was homogeny

Table 1.2 Homogeneity of Writing Test

	Levene Statistic	df1	df2	Sig.
Based on Mean	2.898	1	22	.103
Based on Median	2.545	1	22	.125
Result Based on Median and with adjusted df	2.545	1	14.297	.133
Based on trimmed mean	2.681	1	22	.116

The check the normality of the pretest and posttest both experimental and control group, the data were calculated by using Kolmogorov-Smirnov (SPSS v.20). Table 1.3 and table 1.4 showed that both tests were normal. The *Sig.* levels of writing pretest were .988 which was higher than 0.05. And the *Sig.* level of writing posttest was higher than 0,05 (.659>0,05).

The inter-rater reliability of the writing test was calculated through Spearman rho which turn out to be showing high reliability. (Table 1.3)

Table 1.3 The Reliability of the Writing Test

Class	Test	Reliability Score	Decision
Control	Pretest	.852	Very High
	Posttest	.785	Very High
Experimental	Pretest	.646	High
	Posttest	.809	Very High

The following table, shows the result of descriptive statistics for comparing the mean of N-gain score of posttest and pretest in the experimental class and control class.

Table 1.4 Group Statistics for Writing Post-Test

	Class	N	Mean	Std. Deviation	Std. Error Mean
Result	Experimental	12	24.17	15.355	4.433
	Control	12	7.67	6.020	1.738

Table 1.5 Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means
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	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
result Equal variances assumed	4.638	.042	3.466	22	.002	16.500	4.761	6.626	26.374
Equal variances not assumed			3.466	4.304	.004	16.500	4.761	6.308	26.692

From the last table revealed that the significant value (2-tailed) is .002. It means that there is significant difference between the use of electronic portfolio assessment in the experimental class and the use of paper based in control class since 0.00 is lower than 0,05. Likewise, the t-value obtained by researcher was 3.466 and the t-table was 2.446. It was found that the t-value is was higher than t-table.

For the second research question, the finding showed that students had the positive attitude toward the use of portfolio assessment in writing descriptive text. The following table revealed the each of four categories was responded positively.

Table 1.6 The Gained Score of Questionnaire

No	Categories in Questionnaire	Max Score	Gained Score	Percentage
1.	Student's attitude toward the Actual Practice in Preparing Portfolio	192	150	78%
2.	Student's Attitude toward the advantages and disadvantages of Portfolio	576	417	72%
3.	Student's Attitude toward the Portfolio Sharing Activities	192	144	75%
4.	Student's perception on understanding portfolio	432	320	74%
Total		1392	1031	74%

Moreover, the reliability test was run to check the reliability of questionnaire using Croncach Alpha reliability formula in SPSS 20, the result revealed that the questionnaire was reliable. (Table 1.7)

Table 1.7 Reliability of Questionnaire

Cronbach's Alpha	N of Items
.717	31

VI. Conclusion

The teaching methods and techniques have developed through the years. The use of technology is considered to be more attractive in learning. Thus, electronic portfolio might be the purpose way in teaching. Additionally, by implementing this assessment could encourage the students to facilitate their writing performance through online learning. It also gives them the chance to reflect on their learning process.

In relation to the second research question, it is concluded that the use of electronic portfolio has positive impact on student's attitude. The students consider the electronic portfolio as their way to actively learning although outside the classroom and can facilitate them the new way of learning. Moreover, it helps them to keep their works safely and efficiently.

VII. Suggestion

Since there are some steps in applying the assessment, the teacher should master the procedure in using this assessment on order to make learning run well.

For further researcher it might be possible to investigate different English skill such as speaking and another psychological aspect of students such as student's motivation.

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