

A COMPARATIVE STUDY BETWEEN HANDWRITTEN AND COMPUTER TEXT ESSAYS ON RATERS' SCORES

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Abstract

Penelitian ini bertujuan untuk mengetahui efek dari esei yang disajikan dalam bentuk tulisan tangan dan teks komputer terhadap nilai esei; dan untuk mengetahui apakah panjang esei mempengaruhi penilaian. Sebanyak 21 esei dipilih secara acak dari mahasiswa program studi Bahasa Inggris, Universitas Lampung. Esei disajikan dalam tiga format: tulisan tangan, teks komputer spasi tunggal dan teks komputer spasi ganda. Desain penelitian ini menggunakan studi kasus dan data penelitian dianalisis menggunakan ANOVA satu arah. Hasil penelitian menunjukkan bahwa esei dengan format tulisan tangan mendapatkan nilai tertinggi dibandingkan esei dengan teks komputer. Nilai F_{hitung} nya yaitu 5,5 sedangkan F_{tabel} yaitu 5.05 dengan nilai signifikan p sebesar 0,006. Dapat disimpulkan bahwa ada perbedaan statistik antara ketiga format esei; namun panjang esei tidak mengurangi efek presentasi. Diharapkan penelitian selanjutnya dapat meneliti lebih jauh penyebab efek presentasi tersebut dan menemukan cara untuk mengurangi efeknya.

This study aims at finding out the effect on essays presented as handwritten and as computer printed text on raters' scores and whether the length of the essays influences the scoring. Twenty one (21) sample essays were randomly selected and produced by students of English Study Program of Lampung University. The essays were presented in three different formats: handwritten, computer text in single space, and computer text in double space. This research applied *one shot case study design* and the data were analyzed using one way ANOVA. The result revealed that handwritten essays received higher scores than those in computer printed texts. The F-value was 5.5 while the F-table was 5.05 and the p value was 0.006. It revealed that there was statistically different mean on raters' scores. It is suggested that the future researchers to analyze the causes of presentation effect on raters scores and to apply the more valid strategies to reduce the presentation effect.

Keywords: *assessment, essays, handwritten, computer text, mode of presentation, raters*

INTRODUCTION

In today's world the emergence of modern technology works together with our daily routine. Computer is one of modern technology that is assistive and beneficial to create a more effective work. In this digital era, the role of technology, particularly computer, in academic setting is very undeniable. From faculty members to staffs, headmaster, teachers, students, they all have to master the basic skill of computer operation.

In Indonesian education system, students are taught the skill of operating computer since they are in the middle school. Students are taught the basic skill of typing, editing, printing, etc. By the times they are in high school, they have developed a fluency in typing. In college life particularly, the lecturers and instructors often assign students to type their tasks instead of handwrite them. The hardship of writing down word by word of sentences of an essay has been replaced by the magic tool of computer. Students feel more confident when completing their assignments with computer rather than with handwriting. They are confident that they can gain higher score when they complete the assignment with computer rather than with handwriting

This research was conducted in an attempt to find out whether presentation effect causes the inequality in assessment or not. It is done through comparing two different format of essays which are identical in content. The formats were the original handwritten and the transcribed computer text of the handwritten. The computer format was chosen because the researcher admitted that the involvement of technology cannot be overstated, therefore this research was intended to test

whether such involvement has led to easier assessment and higher grade or to tougher assessment and lower grades. This research was also to response Chase (1986) who reported that although composing essays on computers is becoming more common, studying its effect on writing assessment has received little attention.

One notable work was by Powers, Fowles, Farnum and Ramsey (1994). These authors converted a sample of original handwritten essay answers into word processed versions and transcribed a sample of original word processed essay answers into handwritten versions. Analysis of the scoring revealed that handwritten answers were awarded higher average scores than word processed answers, irrespective of the original mode in which the answers were produced.

Another similar study by Russell & Tao (2004) found that the computer-printed essays have received lower scores than handwritten essays. The researchers attributed this to the concept that errors are more hidden in the handwritten assignments, whereas errors in computer-printed assignments are very visible to the grader of the assignments.

This study is basically a half replicate from the study conducted earlier by Powers et al (1994) as well as by Russell and Tao (2004); thus, the procedures also were adopted from the procedures of the previous research. However, unlike those previous research, this study did not investigate the causes of presentation effect because it would take much time and efforts.

The form of essay composition was then chosen because it is the most suitable writing form in college level. Students, including freshmen, should have acquired essay writing because they will be creating such academic pieces throughout the academic year. The importance of a good essay composition was highlighted in this research to train them to write better.

It is how Raimes (1983:3) states that writing involves a systematic way of thinking. In addition, the close relationship between thinking and writing makes writing a valuable part of any language course.

Maley (1998) as quoted in Rudy (2013:15) states about several degrees in order to get a good quality of writing; a high degree of organization in the development of ideas and information, a high degree of accuracy so that there is no ambiguity of meaning, the use of grammatical features, and a careful choice of diction, grammatical pattern, and sentence structure.

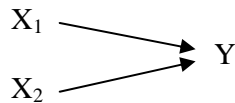
According to Walters (1999:90) as quoted in Rudy (2011:17), writing is a complex process since it is made of a large number of skills which involved various language elements such as: punctuation, spelling, grammar, diction, etc. In other words, a writer should achieve the ability of crafting a good piece of writing by combining those elements in free-mistake as well as possible.

Tarigan (1981:1) put the skill of writing as the last skill learners should master, following the other three skills in language composition; listening, speaking, and reading. It suggests that writing is the most difficult skill to master a language since it has three prerequisites of skills mentioned above. It is not surprising that students often feel reluctant when they are assigned a writing assignment.

METHOD

In designing this study, the researcher adopted *one shot study design*. Based on the research question in this study, handwritten and computer test are independent variables; while raters' score is dependent variable.

Here is how the design looks like:



Where,

X : Medium of presentation

X₁ : Handwriting

X₂ : Computer typing

Y : Raters' scores

(Setiyadi, 2006 : 131)

In order to choose the research sample, the researcher used random sampling by simply drawing lottery for twenty one (21) essays out of forty one essays (41) produced by students in third semester of English Study Program of Lampung University. The 21 sample size was selected randomly to meet the exact number of sample in which the raters would be scoring.

The hypothesis was statistically analyzed using One Way Anova that draws the conclusion in significant level if $P > 0.05$, H_0 accepted, and $P < 0.05$, H_1 accepted.

As reported by Russell and Tao (2004), the researcher drew the hypothesis as follow:

H_0 : There is no difference on raters' score for both essays presented as handwritten format and as computer-text format;

H_1 : There is difference on raters' score for both essays presented as handwritten format and as computer-text format;

H_0 : The length of essay does not eliminate the presentation effect;

H_1 : The length of essay eliminates the presentation effect.

RESULTS AND DISCUSSIONS

Result of one way ANOVA

The one way ANOVA was performed to compare mean of more than two independent variables. Below is the table of descriptive statistics from SPSS:

Table 1. Descriptive Statistics

Descriptive Statistics			
Dependent Variable:Rater's Score			
Essay Format	Mean	Std. Deviation	N
handwritten	66.7143	8.34502	21
single space point 12	61.5000	8.03352	21
double space point 14	58.8571	7.00026	21
Total	62.3571	8.36174	63

From the table above we can see that the mean of handwritten is 66.7 (rounded), single spaced is 61.5, and double spaced is 58.9 (rounded). It was clear that handwritten format has greater mean than the other two formats. Thus, we can

assume that there is difference in scores among the three groups; so the null hypothesis was rejected.

Table 2. One way ANOVA

ANOVA					
Rater's Score					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	671.357	2	335.679	5.498	.006
Within Groups	3663.607	60	61.060		
Total	4334.964	62			

The table of ANOVA above revealed that the F value is greater than the F table and the p value was less than .05 ($F_{\text{value}} > F_{\text{table}}; p < .05$). The F value above was 5.5 (rounded), and the f table was 5.05 (see appendix 5), which means $F_{\text{value}} > F_{\text{table}}$. It is assumed that the null hypothesis was rejected and that there was statistically significant effect of mode of presentation towards raters' scores.

Table 3. Result of Post Hoc Test

Multiple Comparisons						
Rater's Score						
Tukey HSD						
(I) Essay Format	(J) Essay Format	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
handwritten	single space point 12	5.21429	2.41148	.086	-.5810	11.0096
	double space point 14	7.85714*	2.41148	.005	2.0618	13.6525
single space point 12	handwritten	-.5810	2.41148	.086	-11.0096	.5810
	double space point 14	2.64286	2.41148	.520	-3.1525	8.4382

double space point 14	handwritten single space point 12	- 7.85714* -	2.41148 2.41148	.005 .520	-13.6525 -8.4382	-2.0618 3.1525
		2.64286				

*. The mean difference is significant at the 0.05 level.

We can see from the table above that the p -value which was less than .05 was between the group of handwritten and double spaced format, that was .005. The group of single spaced was not statistically different from one another because its p -value was greater than .05. In order to find out the size of difference of the above calculation, we need to calculate the effect size, showed that there was a statistically significance different on mean awarded by handwritten format than mean awarded to the other two formats. In this research, the effect size was .155, which means that the size difference was not strong, although it was statistically difference. However, its *Observed Power* was greater than 0.80, which means that this analysis has an accurate value.

In order to prove the second hypothesis, the researcher compared the mean score from the two different formats of computer printed versions. From descriptive statistics above we can see that the mean score of essay in double space version was lower than the mean score in single space; while the handwritten version still received the highest mean score among them. It revealed that the length of essay did not eliminate the presentation effect. However, the mean of both computer versions was not significantly different.

From the results above, as evidenced by Powers (1994) and Russell and Tao (2004), it was clear that the mode of presentation did influence the score awarded

by raters. The different mode of presentations causes the different assumptions on presentation format as what is called as presentation effect.

There are several possible causes upon why this different standard of scoring happens: a) the visibility of error, b) higher expectation on essay as computer printed text, and c) stronger connection when reading essays as handwritten text than as computer text.

CONCLUSIONS AND SUGGESTIONS

Based on the data analysis and discussions above, the researcher draws conclusion and suggestion as follows:

1. There is a statistically different mean on essay scores between original handwritten format and transcribed computer text format. In this research, the F_{value} was 5.5 and the F_{table} was 5.05, which means $F_{\text{value}} > F_{\text{table}}$ in the significance level of $p\text{-value} < .05$. The results suggested that the null hypothesis was rejected and the research hypothesis was accepted. However, the length of the essays did not eliminate the presentation effect. The mean score of essay in double space version was lower than the mean score in single space; while the handwritten version still received the highest mean score among them, which was around.
2. For future researchers, it is suggested to deeply analyze the causes of presentation effect on raters' scores. If it is caused by the errors visibility, then what happen if both formats contain no error? The future researchers might want to manipulate any spelling, punctuation, or capitalization mistakes in the

transcribed format of handwritten, so raters will receive both formats in free error. The future investigation should proof whether the causes of presentation effect is still reliable or not. Further, it is suggested that the future researchers apply the more valid strategies to "train away" or to reduce the presentation effect which might put students into disadvantage when they are writing in computer mode.

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