THE EFFECTIVENESS OF ONLINE BRAINWRITING AND BRAINSTORMING TECHNIQUES IN TEACHING WRITING TO STUDENTS WITH DIFFERENT LEARNING STRATEGIES

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Article Info

Abstract

This current study tried to examine online brainwriting compared to brainstorming as prewriting strategies in improving the writing skills of students with high and low frequency of LLS. 2 x 2 factorial design of experimental research was carried out to collect the data from 60 college students majoring in Dance Education. Two experimental groups, A and B, were given two different treatments: online brainwriting and brainstorming. SILL by Oxford (1990) was used to determine whether the students have high or low frequency of LLS.The ANOVA test showed $\rho=0.000$ for both online brainwriting and brainstorming which prove effectiveness of both techniques. It is also found that online brainwriting is proven to be significant for both high and low frequency of LLS students with $\rho=0.000$. Brainstorming, on the other side, is only significant for high frequency of LLS students with $\rho=0.000$, yet is proven insignificant for low frequency of LLS students with $\rho=0.039$. However, the results showed there was no interaction between the use of prewriting strategies and the frequency of LLS which was proven by the $\rho=0.529$. Future researchers might consider having a mixed method of study in comparing those two strategies to get more precise results.

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INTRODUCTION

Over decades, various researches on prewriting strategies have been investigated to strive for its effectiveness coping with different kind of contexts (e.g. King 1990; Kellog 1990; King 1991; McAlister 1999; Vincent 2002; Coskun 2005; Aaron et al 2006; Firkins 2007; Bush &Zuidema 2012; Morris 2012). Becoming fully aware that writing is not simply a matter of correct usage and mechanics yet more to the process of conveying ideas to the audiences, many teachers find prewriting strategies useful to trigger students' ideas development. Through prewriting strategies, teaching thinking strategies essential to effective written communication becomes the main concern to serve students a planning stage. This planning stage in a form of prewriting strategies is believed to be able to promote the next stages of writing process, leading to better quality of students' writing.

Writing in EFL context is regarded as a fundamental skill, owing to the fact that it requires thinking, forces students to organize their ideas, and needs a good command of the knowledge to be written on. On that account, many researchers in EFL writing contends that writing is one of the most difficult language skills to master (e.g. Kurt &Attay, 2007; Latif, 2007). This issue deals with the major difference between expert and EFL writers in their use of planning stage; as Asmari, A.A. (2013, p.131) points out that experts develop far more elaborate and integrated goal networks than novice do. Good writers recognize the essence of the prewriting phase, viewing it as rehearsal in which preparation comes from daydreaming, sketching, note-taking, reading, conversing and writing itself.To encounter this problem, EFL teachers keep on trying to find an effective method of teaching writing.

The notion of "digital natives" was firstly defined by Prensky (2001, p.2) as "native speakers' of the digital language of computers, video games, and the Internet". Thus, students who were born when computers, video games, and the Internet were already part of their daily life are considered as digital natives. Herring (as quoted by Bloch, 2011) proposed the term computer-mediated discourse (CMD) as "the communication produced when human beings interact with one another by transmitting messages via networked computers" (p. 67). CMD has been divided into two areas: synchronous which refers to interaction in real time (which more resembles oral language, such as in chat room) and asynchronous discourse for example the interaction found in email and blog comments.

Further, Bloch (2008), as a techno-realist, regards the fear of failure in implementing a technology in writing class as understandable fact due to all existing considerations, i.e. plagiarism, students' unlimited time expectation to teachers, the nature of technology itself, teachers' roles, etc. Zhang and Barber (2008) in their introduction of Handbook of Research on Computer-Enhanced Language Acquisition and Learning argue that it is crucial when incorporating technology in the language learning process that the relationship between activities in the use of technology itself and the learning pedagogy be carefully considered.

To give a perspective in the technology use, Warschauer (1997, p.475) proposed the special features of online communication, i.e. text-based and computer mediated, many-to-many, time- and place-independent, usable across long distances, and distributed via hypermedia which provide impressive array of new ways to connect learners. From the context of sociocultural learning theory, these features of online learning is viewed as having potential use for collaborative language learning.

Prewriting is everything that takes place before someone start to write the first draft. The process might even take about 85% of the writers' time which tells that the prewriting phase is essential. In this prewriting phase, a writer gathers ideas by looking for sources through several strategies. Thus, the aims of the prewriting process for EFL students is to be familiar to the characteristic of writing target (its organization and its language features) and come up with ideas to write. Several strategies, such as: brainstorming, mind-mapping, survey,

observation, and guided-discussion, has been done as prewriting activities by practitioners. As consequences, these varied strategies invite researchers all around the world to take a look at its effectiveness in different context. This is shown by the fact that research on prewriting strategies has been conducted since 1970s and continues until nowadays, as an illustration; research on prewriting strategies has been done by Emig (1971) and Morris (2012).

Brainstorming was firstly introduced by 'The Father of Brainstorming', Alex F. Osborn, in his book 'Your Creative Power', published in 1952. Osborn mentioned that this technique began in his advertising agency in 1939. The technique, which refers to the oral generation of ideas by a group, provides a space for a group of people to gather and generate as many ideas as possible to find solution to a problem (Takagi, N., 2013, p.587). Being well-known, the technique also spread in the world of teaching where creativity became essential. Many education practitioners (Brown & Paulus, 2002; Bolin & Neuman, 2006; Ang, et.al, 2013) started using brainstorming in the classroom to stimulate students' creativity and to serve collaborative work among students.

Despite its advantages, teachers found some drawbacks in conducting brainstorming. One of the drawbacks is the time allotment of the activity. Group brainstorming conducted in the writing class takes time. Besides, brainstorming might inhibit creativity of silent students since they have a tendency to be reluctant in expressing ideas through spoken conversation. As the result, the brainstorming process is frequently dominated by one or two individuals. In addition to these inhibitory factors, Smith (1995, p.140) argued that interactive brainstorminggroups tend to display two main tendencies. The first tendency isthat groups typically tend to lower their idea-generation performanceduring later periods of the brainstorming session. This mayreflect reduced availability of ideas, reduced motivation in time, orsome degree of cognitive inhibition. To face the drawbacks, many variations of brainstorming, then, came into being. Brainsketching and brainwriting are two of

these variations which might be alternatives over traditional brainstorming to cater the specific needs of classroom condition.

Brainwriting, which is defined as an alternative technique of brainstorming that use writing as the media, tries to encourage more uniform participation within a group. This technique is also design to generate lots and lots of ideas in a short amount of time. During the process, the participants are allowed to write new ideas, combine other ideas, adapt ideas to new areas, modify ideas into alternative approaches, and add to the ideas. Silent students get more advantages using this technique in a way that they have a chance in expressing ideas through written media. In addition, Takagi (2013, p.592) reported that the majority of students, the participants of the research comparing brainstorming and brainwriting, responded by choosing brainwriting over brainstorming for its effectiveness in gaining ideas.

As technology spreads its influence in teaching process, to teach writing, the collaborative language learning might be implemented in a form of online brainwriting, or also known as electronic brainstorming. Students are grouped and joined the brainwriting in the provided virtual space like website or e-learning portal. Using this technique, students are no longer restricted to time boundary. They can be active in the group brainwriting session whenever they are available. Here, the moderator task is to make sure that participants keep participating. The rules or steps of brainwriting also apply in electronic brainwriting. The number of ideas in each post should be defined to give every student equal participation.

Apart from strategies applied by teachers, the time limitation suffer by EFL learners needs to be encountered to better reach students' performances. For that reason, other factors influencing the students' level of proficiency require more attention, especially the ones which raises students' autonomy so that time limitation in class can be substituted by their autonomy outside the class. One among those factors specified to EFL students is the frequency of Language Leaning Strategies (LLS) used by the

students. LLS has been investigated by several researchers among the world.

Several studies show that high frequency of LLS is proven to lead to high students' proficiency (e.g. Lan, 2005; and McMullen, 2009). In adition, Giffiths (2003) in his research found that the frequent use of a large number of language learning strategies is reported by the most proficient learners. Further, he suggested teachers to encourage students to use more strategies in their learning process to improve their proficiency.Thus, the investigation of students' level of LLS was found to be useful to support teaching and learning process. As a follow up of the findings, to further know the essence of LLS investigation, some practitioners started to have training on LLS. They believe that the strategies are teachable and by teaching the strategies they expect their students to have better language proficiency. To get insightful understanding, researchers on LLS suggest more studies to investigate its influence in different contexts and situations. Thus, responding to the suggestion, the coming study is investigating the comparison of the use of different prewriting strategies by also considering the level of LLS in EFL context.

METHOD

This study uses quantitative research approach which includes factorial design and questionnaire. Factorial design is applied in this experiment since there are two independent variables (one treatment variable and one moderator variable) observed in the experiment. The data are in forms of quantitative data which are presented in numbers and diagrams. There are 2 forms of data; i.e. students' questionnaire results on the frequency of language learning strategies results, and students' pretest and posttest scores.

A quasi experimental design is used since a true experimental design which requires random assignment of students to groups is not possible. The existence of pretests helps in controlling the threats to internal validity. The pretest is also important to find out whether the

treatment improves the students' scores which is determined by the posttest. The design of this study is a modified version of Tuckman's (1999) model of a 2 x 2 quasi-experimental design with pretest-posttest group design. There are two experimental groups in this design: the experimental group 1 that receives online brainwriting as the treatment and the experimental group 2 (in the original model, this later group is called control group) that receive traditional brainstorming as its treatment. Both groups are given a pretest and the posttest. A random assignment is applied to determine the control and experiment groups to minimize the bias factors in this study.

RESULTS AND DISCUSSION

The first research question tries to find out the significance of online brainwriting on English writing skill of students with high frequency of LLS compared to that of students with low frequency of LLS. According to the test statistic using paired samples test, the significance scores for these two groups was 0,000. Since the ρ value is below 0.005, it is said that both treatment are significant on English writing skill of students with high frequency of LLS. Although the mean difference of both strategies shows a gap; -14.83333 and -13.13333, the ρ values of both strategies are the same. Therefore the Ho1; there is no difference between the significance of online brainwriting on English writing skills of students with high frequency of LLS compared to that of students with low frequency of LLS, is accepted.

The second research question addresses the significance of brainstorming on English writing skill of students with high frequency of LLS compared to that of students with low frequency of LLS. The mean difference of Brainstorming to students with high frequency of LLS is -13.96667, while to those with low frequency of LLS is. -9.53333. The gap between those two mean differences is obvious; 4.433334. Based on the paired samples test 2, the significant of Brainstorming to students with high frequency of LLS is 0.000. This means Brainstorming is significant in improving the writing skills of

students with high frequency of LLS. On the other hand, the significant of Brainstorming to students with low frequency of LLS is 0.039. The value, which is above the $\rho=0.005$, means Brainstorming was not effective in improving the writing skills of students with low frequency of LLS. Accordingly, the Ho2; there is no difference between the significance of brainstorming on English writing skill of students with high frequency of LLS compared to that of students with low frequency of LLS, is rejected.

In answering the third research question; how the significance of online brainwriting compared to brainstorming on English writing skill of students with high frequency of LLS is, the SPSS calculation on paired samples test 3 shows that both Online Brainwriting and Brainstorming have equal significances. Both strategies resulted in $\rho=0.000$, thus, both treatment to students with high frequency of LLS are proven to be significant. The mean differences, which are -14.83333 and -13.96667, are considered to be slightly different and do not create a gap in the significances. Consequently, the Ho3; there is no difference between the significance of online brainwriting compared to brainstorming on English writing skill of students with high frequency of LLS, is accepted.

The significance of online brainwriting compared to brainstorming on English writing skill of students with low frequency of LLS is the goal of the fourth research question. According to the paired samples test 4, Online Brainwriting's mean difference is -13.13333, while Brainstorming's mean difference is -9.53333. The SPPS calculation resulted in a difference of significances. The Online Brainwriting group has the significance of 0.000, which is proven to be significant. It means Online Brainwriting is significant in improving the writing skills of students with low frequency of LLS. On the contrary, Brainstorming group has the significance of 0.039, which is considered insignificant since the value is below the $\rho=0.005$. This means Brainwriting is not significant in improving the writing skills of students with low frequency of LLS. Accordingly, the Ho4; there is no difference between the significance of online

brainwriting compared to brainstorming on English writing skill of students with low frequency of LLS, is rejected.

The fifth research question tries to find out the significance of online brainwriting on students' English writing skill. Using paired sample test, the SPSS calculation resulted in the significance of 0.000 with -14.4000 mean difference. It means that Online Brainwriting is significant in improving students' writing skills. Therefore, the Ho5; Online brainwriting shows no significant effect on English writing skill, is rejected.

The sixth research question; how the significance of brainstorming on students' English writing skill is; resulted in similar findings to the previous question. The SPSS calculation on the paired sample test shows the significance of 0.000 with -11.33333 mean difference. This means that Brainstorming is also significant in improving students' writing skills. Ignoring the fact that in the previous findings I find Brainstorming is not significant in improving the writing skills of students with low frequency of LLS, the Ho6; Brainstorming shows no significant effect on English writing skill, is rejected.

The final research question addresses the interaction between the use of prewriting strategies and the frequency of LLS. To answer this question, I use the tests of between-subjects effects or ANNOVA test. The SPSS calculation resulted in the significance of 0.528 which is above the $\rho=0.000$. This means there is no interaction between the prewriting strategies and the frequency of LLS. That also means that the kinds of prewriting strategies and the frequency of LLS of the students did not affect each other on students' writing skills. For this reason, the Ho7; there is no interaction between the frequency of LLS and the used prewriting strategies, is accepted.

CONCLUSION

Based on the results described above, it can be summed up that both online brainwriting and brainstorming played a significant role in

improving English writing skills of the students. By separating the group into two minor groups, high frequency of LLS students and low frequency of LLS students, it is also found that online brainwriting is more effective than brainstorming. This is due to the reason that online brainwriting is proven to be significant in improving the writing skills of students with both high and low frequency of LLS, while brainstorming is only significant in improving the writing skills of students with high frequency of LLS. However, there was no interaction found between the prewriting strategies and the frequency of LLS which implies to the absence of the use of prewriting strategies interfering students' frequency of LLS or vice versa.

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