

The Effect of Using Google Docs on The Students' Skill in Writing Expository Essay Across Personality Learning Style

Bagio Tjahjadi*, Sintha Tresnadewi, Bambang Yudi Cahyono

Department of English-Universitas Negeri Malang

baggy.cahaya@gmail.com*

*Corresponding author

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ABSTRACT

Abstract: This research is aimed at (1) finding out whether the EFL students taught using Google docs show better writing ability than those taught without using Google docs, (2) discovering if there is a significant difference in writing ability between the introverted students and extroverted students taught using Google docs. This research involved two intact classes of ten graders in SMA Kristen Charis Malang consisting of 29 and 28 students respectively that were randomly selected to be the experimental and control group. The experimental group worked collaboratively outside the class using Google docs whereas the control group worked in the face-to-face class. Both groups were assigned to compose an expository essay based on the topics given in the pre-test and post-test to reveal their writing achievement before and after the treatment. The results showed that the mean score of experimental group was significantly higher than that of the control group. When it comes to personality learning styles, there was no significant difference in the mean scores obtained by the extroverted students and introverted students.

INTRODUCTION

In the field of education, one of the English learning outcomes expected of the Indonesian high school graduates is that they sufficiently develop English communicative competence (Depdiknas, 2006) which involves functional skills to convey messages orally and in writing properly. However, some challenges have been confronted in teaching English writing due to the limited amount of time allocated for English language learning (Depdiknas, 2016), the concomitant lack of exposure to receptive skills and writing practices inside and outside the classrooms and ineffective writing teaching activities (Bilal, Tariq, Din, Latif, & Anjum, 2013). These issues may lead to insufficiently focused endeavour in developing students' writing skill and lack of motivation as well (Gupta & Woldemariam, 2011). Therefore, it is of significance to capitalize on the benefits and potential of information and communication technology to cater to students' needs for sufficient writing practices and opportunities to construct their knowledge through the free expression of thoughts and ideas and enhance their' writing skills to arrive at the stipulated goal.

Google Docs is one of the increasingly popular web-based teaching and learning platforms (Jeong, 2016). With Google Docs, students tap into learning-enhancing communication that facilitates access into information at far greater ease (Gunuç & Babacan, 2017). Students who are raised and immersed in the technological environment, known as digital native will readily embrace the idea of capitalizing on it for educational purposes if they are allowed to (Kurt et al., 2013). In other words, Google Docs opens up extensive opportunities to use English in a real interaction instead of being "a mere practice" in confined language classroom (Li, Dursun, & Hegelheimer, 2017). Additionally, it offers "easy accessibility" encompassing the practical convenience of the program features provided such as the interface which facilitates real time commenting and chatting and appeals to diverse learning styles (Thomas, 2011 ; Gunuç & Babacan, 2017)).

Google docs provides a potentially effective platform which makes it easy for the setting up of groups and employment of group work supporting devices (Abrams, 2019). With the combination of synchronous and asynchronous features available, students can do simultaneous editing on the same document shared online and multiple editing offline whilst responding to the real-time feedback and consider the edited documents visible to them at the same time (Jeong, 2016). This active participation in the giving of peer feedback and self-review constitute positive experiences in the process (Brodahl et al., 2011).

Vygotsky (1978) emphatically argued that effective learning process hinged heavily on the social interaction and this is obviously found in collaboration. As such, collaborating writing entails students' partaking of the social environment to continually practice and capitalize on their potential to acquire diverse skills including the grammatical accuracy, appropriate lexical use and discourse knowledge through the reciprocally communicated ideas. The nature of collaborative writing mirrors the goal set in the Process Standard of National Curriculum of 2013 that places the current emphasis of teaching and learning process at school on the development of students' individual competence and ability to take advantage of diverse learning resources to construct their own

knowledge in the flexible learning settings (Depdiknas, 2016). Such endeavour linked to students' enhanced motivation and autonomy is possible to be achieved through the use of collaborative application such as Google docs (Challob et al., 2016)

Another aspect contributing to the improvement of writing skill that is worth consideration is the personality of students. Davis (2010) states that personality is the essential base on which the learning and teaching is founded. Each personality type has a strong linkage to a biological base that an individual possesses (Eysenck, 1967). This inborn difference exerts influence on the way each person engages themselves in learning as he or she thinks, feels, perceives everything he or she deals with (Pervin, & John, 2001). Whereas Davis (2010) (2010) contends that the personality is not merely related to the biological inheritance but it also stems from exposure to the external factors such as culture, environment and other factors.

Personality learning style comprises extroverted and introverted students. Extroverted students are overt thinkers who easily project out their mind into the world through actions and verbal expressions, whereas, the introverted ones love to turn inwards and are reserved in a response to whatever is going on around them (Myers 2003). Extroverted students are believed to perform better in the stimulating language learning environment because they are able to deal with physiological stress and draw on the information stored in the long-term memory (Dewaele, 2013). They are inclined to take a risk and bravely capitalize on opportunities in using different new words and grammatical structure (Zafar & Meenakshi, 2012). Whereas, a research conducted by Boroujeni et al. (2015) indicated that introverted students showed a better writing skill than the extroverted students did. This research result is in line with the finding of the research conducted by (Cain, 2013) that introverted students showed considerable engagement in the online environment which afforded them opportunities to develop their writing skills. This indicates that the introverted students also have an edge in language learning as they demonstrate self-reliance which is undoubtedly, a strength for a success (Hurd, 2002 cited in (Zafar & Meenakshi, 2012). However, some others studies reveal that personality learning styles do not make any significance difference in what the introverted and extroverted can achieve in learning language. (Cahyono & Mutiaraningrum, 2016; Hajimohammadi & Mukundan, 2011; Hemmatnezhad et al., 2014). The inconsistency presents opportunities for further exploration into the relationship between the personality learning style and language learning achievement, especially in terms of writing skills.

In terms of the effect of using Google Docs on students' writing skills most previous findings of the research conducted on tertiary education level (Suwantarathip & Wichadee, 2014; Seyyedrezaie et al., 2016) revealed that students showed better writing skills and positive perception that led to enhanced writing performance. However, a finding of the research conducted by (Woodrich, & Fan (2017) conversely, showed the strength of face-to-face collaboration over the online collaboration. Taking into account the characteristics of today's students exposed to and immersed in the digital environment and the needs for the use of ICT for social communication and interaction (Otta & Travella, 2010) and as there has not been any research conducted to find out the effect of using online collaborative technology on the Indonesian high school students' writing skill in the light of their personality learning style this research is conducted with the following purposes: (1) to find out whether EFL students taught by using Google Docs show better writing skill than those taught without using Google Docs; (2) to examine whether there is any difference in Indonesian students' writing skill across the personality learning style.

METHOD

This present research was intended to reveal the cause and effect relationship by examining the effect of using Google Docs on students' skill in writing expository essays across the personality learning style. It involved two intact classes of grade 10 at SMA Kristen Charis in Malang. Grade 10 Technology comprised 29 students specializing in Natural Sciences, and Grade 10 Business consisted of 28 students specializing in Social Sciences. In the light of the quasi-experimental design employed, the groups were then assigned to the experimental and control group randomly.

Students in the experimental and control group were assigned to write an expository essay based on the topics given in the pretest and in the post-test. In the pretest, the three topics, from which they could choose, were how everyone could become a great leader, how social media affected people, and how one could make his or her life meaningful. Whereas, in the post-test, students could choose from the following topics given: how friendship impacted their life, how the current technology changed the way people communicated, and how life was challenging for teenagers as they grew up in today's world. Students needed to complete the essay in 90 minutes. Students' essays in both the experimental and control group were scored by two raters using a rubric adapted from Jacobs et al.'s "ESL Composition Scoring Profile" (Weigle, 2002) as the rubric to ensure adherence to the writing components (The scoring rubric can be seen in Appendix A). The ESL Composition Scoring Profile, as an analytical scoring rubric, has been proven to clearly measure the specificity of abilities that each trait aimed to measure, signifying evident construct validity (Sulistyo, 2015). In this research, the adaptation of the rubric was conducted by rephrasing the description so that teachers as well as students easily understood how their essays were assessed. The range of scores was adjusted, with equal scores assigned for content, organization, and language use for easy calculation. Furthermore, differentiated mastery levels designated distinct score ranges representing the total weight of components, such as from excellent to very good, good to average, fair to poor, and very poor.

When it came to the teaching of cause and effect type of expository essays, the experimental group was initiated into the use of Google Docs with all the features available at their disposal. They were randomly assigned to groups where they worked collaboratively on a topic they selected using Google Docs. Distinguished from the experimental group, the control group was taught conventionally. Students were introduced to an expository essay in the classroom setting. Both groups engaged in in-class and out-of-class activities.

The Personality Learning Style questionnaire was adopted from the questionnaire designed by Cahyono & Mutiaraningrum (2016) whose validity and reliability have been confirmed to be suitable for characteristics of Indonesian students. There are 29 statements given to students in Charis, which are considered most suitable for their characteristics. Response that students made revealed whether or not they were in favor each statement given in the dichotomous format would reveal the characteristics of the extroverted personality learning style as well as the introverted personality learning style (the questionnaire can be seen in the Appendix B).

RESULTS AND DISCUSSION

The findings are presented in the order of the questions drawn on the results of pretests and post-tests which are primary data, and the testing of the results that serve as the underlying basis on which the decision was made regarding the effects of the experimental measure conducted on students' writing ability that revealed differences in the writing achievement across personality learning styles.

The Effect of Using Google docs on Students' Skill in Writing Expository Essay

In order to find out whether the use of Google docs had an effect on students' writing skill, it is very important to ensure the normal distribution of the data derived from both groups, experimental and control. Kolmogorov- Smirnov test using SPSS 23.0 is thus employed to verify if the data meets the assumption of normality.

Table 2. The Results of Normality Testing

Writing Test	Group	N	Kolmogorov Smirnov Z	Sig.	Description
Pre-Test	Experimental	29	.132	.200	Normal
	Control	28	.158	.070	Normal
Post-Test	Experimental	29	.149	.097	Normal
	Control	28	.160	.064	Normal

Table 2 presents the result of normality testing using Kolmogorov –Smirnov and reveals that the significance values of data in the pre-test and post-test calculated are greater than .05. It can be inferred that the assumption of normality has been met. Therefore, in the light of the level of significance values, the data derived from both groups, experimental and control were normally distributed.

After finding the data were normally distributed, an independent sample *t*-test was conducted to find out students' writing ability in experimental and control group.

Table 3. The Result of t-Test Computation for the Pre-Test Scores

Group	N	Mean	t	df	sig.	Description
Experimental	29	69.34	.467	55	.643	No significant difference
Control	28	68.48				

Table 3 reveals that pre-test scores of experimental group and control group has a significance level of .643. The *t*-test calculation proves that the level of significance of both groups is higher than the level of significance set which is .05 or 95 confidence. It means that students in both groups demonstrate similar writing ability that is evidenced by the fact that there is no significant difference in the mean scores of pre-test between the experimental group and the control group. The analysis is further conducted regarding the post-test scores of both groups using Independent Sample *t*-test.

Table 4. The Results of the Independent Sample t-Test of the Post-Test Scores.

Group	N	Mean	t	df	Sig.	Description
Experimental	29	79.26	-3.112	55	.003	Significant Difference
Control	28	74.45				

Table 4 reveals that the level of significance value of the post-test scores obtained from both groups is .003 which is less than .05 ($.003 < .05$). It also means that mean score of post-test of students in the experimental group differ significantly from that of students in the control group. It can be inferred that students taught using Google Docs show a better ability in writing expository essay than students taught without using Google Docs. Hence, learning using Google Docs exerts an effect on the improvement of students' ability in writing expository essay. By looking at comparison of the Post-Test Scores between the Experimental Group and the Control Group the difference in the Post-Test scores obtained is further revealed for clarity.

Table 5. The Comparison of the Post-Test Scores between the Experimental Group and the Control Group

Group	N	Minimum	Maximum	Mean	Std. deviation
Experimental	29	68	88	79.26	5.545
Control	28	63	84	74.45	6.124

Table 5 presents that the minimum and maximum scores of both groups along with their respective mean scores. The minimum scores are 68 and 63 for the experimental group and the control group respectively while the maximum scores are 88 and 84. From the table, it is evident that mean score of the experimental group is 4.81 higher than that of the control group meaning that the students taught using Google Docs in writing an expository essay show a better writing ability than students taught without using Google Docs. It certainly signifies that the treatment exerts an effect on students' ability in writing an expository essay.

The Effect of Using Google docs on Students' Skill in Writing Expository Essay across Personality Learning Style

Knowing that the mean score of post-test of the experimental group is higher than that of the control group a further analysis is necessarily conducted regarding the post-test scores of the experimental group across personality learning style. The analysis reveals the comparison of the post-test scores between the extroverted and the introverted in the form of mean scores, maximum and minimum scores, and standard deviation in Table 6

Table 6 The Comparison of Post-Test Scores across Personality Learning Style

Learning Personality style	N	Minimum	Maximum	Mean	Std. Deviation
Extroversion	20	68	88	78.95	5.680
Introversion	9	75	88	79.94	5.497

Table 6 juxtaposes the minimum scores and maximum scores of extroverted and introverted students in the experimental group. The maximum scores are equal while the minimum score of the extroverted is higher than that of the introverted by 5 points. Interestingly, the mean score of the introverted is 0.99 slightly higher than that of the extroverted meaning that students of both personality learning style, extroverted and introverted who are taught using Google Docs in writing an expository essay showed a slight discrepancy in their writing ability.

Independent sample t-test was conducted to prove whether there is a significant difference between the extroverted students and introverted students in terms of their writing ability.

Table 7. The Results of the Independent Sample t-Test for the Post-Test Scores across the Personality Learning Style

Learning Personality style	N	Mean	t	df	Sig.	Description
Extroversion	20	78.95	-.440	27	.663	No significant Difference
Introversion	9	79.94				

Table 7 shows that the significance value of the post-test scores obtained from the experimental group across the personality learning style is .663 which is greater than .05 (.6636 > .05). It means that there is no significant difference between the mean scores of the extroverted students and introverted students in the experimental group. It can be inferred that the personality learning style does not have a significant effect on students' writing ability across personality learning style because the introverted and extroverted students show equal writing ability when taught using Google Docs.

The results show that based on the analysis on the pre-test and post-test of the experimental and control group, the mean score of the experimental group is significantly higher than that of the control group. Furthermore, the Independent Sample *t*-test pinpoints that the post-test result of the experimental group has unequivocally significant value meaning that Google Docs exerts an effect on students' writing ability. This points out that students after being taught using Google Docs demonstrate a better ability in expository essay compared to students taught without using Google Docs.

The research finding does agree with some of previous research conducted by (Suwantarathip & Wichadee (2014), Kessler et al. (2012), and (Seyyedrezaie et al. (2016) that shed light on the potential benefit of using Google Docs and its effect on the improvement of students' writing ability. Students demonstrate a better writing performance because they show a better and focused engagement in the learning process that enables them to work on the aspects of writing without the need of waiting for the completion of the content (Kessler et al., 2012). The engagement increases as students involved in the learning process experience heightened perceived comfort in so doing (Woodrich, & Fan, 2017). This is a factor influential over students' developing attitude toward the online tool as well as the ongoing online learning that leads to a greater achievement (Seyyedrezaie et al., 2016).

Students' enhanced performance has largely to do with the dynamic nature of interaction in the collaborative learning which is made possible by special features of Google Docs which enable them work on a text or writing project beyond the time constraint and the confines of place which pose hindrances. Students can readily and instantly access the virtual space and make a response and contribution to the work in progress toward further development (Brodahl et al., 2011). The shared space is accessible at all times and those with whom the text is shared are simply connected that it is easy to go online and offline without restriction. Moreover, the affordances are easy to use especially for those who have not tried it out (Behrend et al., 2011)

As students in the experimental group work on the first drafting, they will never find themselves running out of ideas because the setting of Google Docs enable them to learn as a community where they can share ideas or knowledge with one another instead of racking their brains out helplessly. They work themselves into a collaborative community who mutually benefit in the process of learning (Jeong, 2016). The online environment contributes to the acquisition of information students need in a more of time-efficient manner than when they work on their own. In other words, the online environment helps students develop their content effectively through the collaboration (Elola & Oskoz, 2010).

Students are considerably motivated when can benefit from the interaction as they go through stages in the process of writing. Peer feedbacks and communication going back and forth among students help them lay hold of the aspects of writing better as they dwell on whatever is brought to their attention in the collaboration (Challob et al., 2016). With Google Docs, students have access to the virtual shared space affords opportunities for communication and peer-feedbacks because the setting enables everyone involved therein to view whatever changes are made in the text in real time. Furthermore, commenting can be performed through the pop-up chat room alongside as a means of communication and highlighting the text for which correction is suggested with the commentators indicated (Kessler et al., 2012).

Peer feedbacks not only ramps up students' skill in organizing a better content development and structure of the essay they work on through multiple suggested revisions Strobl,(2014), Elola & Oskoz (2010), but also help them to a certain extent be mindful of the accuracy of grammar that they make attempt to provide correction and revise the incorrect parts that leads to a better mastery thereof (Kessler et al. (2012); Elola & Oskoz (2010). In this way, the feature of Google Docs provides a space for students to make improvement as they respond to suggestions, peer review, they learn to negotiate meaning to the point that they make adjustment and seek to modify the input to make their own (Schenker, 2016). The suggestions and comments are needed to be constructively made in reinforcing the fact that students gain something out of the learning process and capitalize on the knowledge for improvement. It confirms that they work their way up that they feel a success (Suwantarathip & Wichadee, 2014). Students are facilitated to take a greater advantage of peer feedback as the revision history feature in Google Docs makes the process effective that students are enabled to retrieve the details saved throughout the process over and over again. Looking into the history students may sort through the information to select what is worthwhile or find what they need best ((Yim & Warschauer, 2017). Students also can learn to exercise care in giving and responding to feedbacks in such a way that they encourage one another. In this way, interaction and conversation build into a partnership which results from a nurtured sense of teamwork (Kim, 2010).

Apart from peer feedbacks that serve as a means of learner-learner interaction, teacher's online feedbacks are equally important as they monitor the learning process students engage in a collaborative manner. Teachers' feedback is vital as he or she is aware of students' needs and is needed to direct students toward the constructive peer-feedback giving to help others deal with the

difficulties they are confronted (Yoon & Lee, 2010). Online feedbacks enhance student-teacher interaction in a time-efficient manner and overcome the time constraint in ensuring students' success in writing performance (Seyyedrezaie et al., 2016).

To sum up, students taught using Google Docs show a better writing ability than students taught without using Google Docs as what is not possible to be accomplished in face-to-face learning in the classroom is made possible by the online environment through the use of Google Docs. This research finding brings about an evidence that is in line with and supports the previous research that teaching students using Google Docs exerts an effect on students' writing ability. Its effectiveness is evidenced by students' improved performance in writing

The results also show that there is no significant difference between the writing ability of extroverted students and the introverted students. The fact that there is not much difference is evidenced by the mean difference obtained from the post-test of the extroverted and introverted students which differ slightly, yet the independent sample *t-test* confirms that it is not that significant at all. In other words, though it is effective to help students improve their writing ability, the application of Google Docs does not particularly impact specific learning style in a significant way. Using Google Docs works out for the introverted and extroverted students equally well.

The result of the research advocates and supports the previous research conducted by Sarani et al. (2011), Hajimohammadi & Mukundan (2011), (Cahyono & Mutiaraningrum (2016) and (Özbay et al. (2017) that point out that both extroverted and introverted students do not necessarily differ in language learning achievement in terms of writing. They capitalize on their own apparently distinct strengths and weaknesses that afford them some success in learning language. Students of different learning personality surely has a certain inclination in viewing, responding to things in accordance with their preference (Keefe, 1979). However, the complexity of the process in acquiring second language is worth consideration as it poses difficulty to precisely ascertain to what extent extroverted and introverted generally differs in the acquisition of second language (Skehan, 1989).

When it comes to collaborative learning, the extroverted students take advantage of their sociable behavior to learn from others. Therefore, they take pleasure in the interaction with others and enjoy group work, whereas the introverted students tend to turn inwards reflectively and conscientious in approaching things that confines their interaction to a few people with whom they are comfortable (Eysenck & Chan, 1982 cited in Zafar & Meenakshi (2012). They tend to favor working together in a smaller group than that of the extroverted students. There is no distinction between both personality styles in coming up with quality information or content and reasoning (Gholami et al., 2011). This reveals that collaborative learning indeed benefits students in the experimental groups regardless of their personality styles.

Students in both personality learning style groups view feedbacks others give differently though, they may take advantage of them equally well. It is in favour of the finding of research conducted by (Hajimohammadi & Mukundan, 2011) that students of personality learning styles can make improvement in their writing through self-correction and responding to the feedbacks. Extroverted students more frequently make most of the vocabulary strategies such as through complimenting and expressing agreements in their interactions. However, both personality styles stand equal chance of expanding their vocabulary and show a better performance (Sarani et al., 2011)

In conclusion, students taught using Google Docs do not show significant difference in writing ability meaning that there is no significant relation between students' language performance in second language acquisition and their personality learning style. The result of this research upholds the previous research that both extroverted and introverted students may gain equal benefits from the language learning using Google Docs which results in the improvement of their writing ability.

CONCLUSION

The development of web-based educational technology such as Google docs has made possible the carrying out of the learning beyond the boundaries or limitations which used to confront students and teachers alike. The accessibility and affordances including the synchronous and asynchronous features facilitate students' learning as they may be enabled to carry on the language learning especially in terms of writing, which takes place within the classroom to another level of achievement through the interaction and collaboration.

Students may find their interaction in the process of writing an expository essay meaningful as they can learn how to develop aspects of writing through reciprocity of peer feedback and reviews. They have opportunities to expand vocabulary and be aware of the mechanics which result from peer-correction and capitalize on the conversation for enhanced understanding of a topic or knowledge reconstruction. Therefore, the use of Google docs significantly affected students' writing ability as seen in the achievement of writing aspects in comparison to students taught in traditional classroom setting which is in line with the finding of the research conducted by Zhou et al.(2012) and Suwantarathip & Wichadee (2014).

The effect of using Google docs on students' writing ability, however, fails to disclose the distinction between the extroverted and introverted personality learning styles which turn out to be similar in their achievement. It is apparent that the interaction between the different personality learning styles contributes to an enhanced outcome of which extent is worth further exploring. Overall, the use of Google docs provides an alternative to language learning especially in terms of writing in the context of online learning.

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