The Effect Of Working in Heterogeneous and Homogeneous Pairs on the Students' Writing Skill

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Abstract

This study investigated the effect of working in homogeneous and heterogeneous pairs on students' writing skill using quasi experimental research design involving 40 students. The first group consisted of 20 homogeneous pairs (paired with similar pre-test scores) while the second group consisted of 20 heterogeneous pairs (participants with high scores are paired with those having low pretest score). Then they were assigned to work on their pairs to write descriptive essays three times. After that they were assigned to write descriptive essays individually. The data was analyzed using independent sample *t* test to compare the students' post-test scores. The result shows that after the experiment the quality of descriptive essays produced individually by the students from heterogeneous group was on the average significantly better than the quality of descriptive essays produced by the students from the homogeneous group. Further investigation on comparing the quality of descriptive essays produced individually by the high achievers from heterogeneous group and high achievers from homogenous group shows that the quality was not significantly different. While the quality of descriptive essays produced individually by low achievers from heterogeneous group is significantly better than the quality of descriptive essays produced individually by low achievers from homogenous group. It means that the heterogeneous grouping was more effective than the homogeneous grouping only for low achievers but not for high achievers. Furthermore, the questionnaire result found that the participants in heterogeneous group had more positive attitude toward the collaborative work than those in homogeneous group.

Key words: *collaborative writing, homogeneous pair, heterogeneous pair*

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Introduction

In learning English, writing is one of the most important skills that should be mastered especially by students at university level. They are insisted to be competent in writing because they are required to produce at least one academic research report which has to be written perfectly without any error such as grammar, coherency, punctuation, etc. However, writing is a complex process; some of its aspects cause particular difficulties for the students. They commonly face some problems such as identifying and generating idea, planning, and organizing a text (Yarrow & Topping, 2001). Writing is often also a solitary activity, lacking the interaction, and dialogue with others which social interactionist theories such as Vygotsky considers crucial for learning process (William & Burden, 2000).

Researchers and educationalists have addressed those difficulties in writing by providing training or support, or by allowing students to make dialogue with others. This approach is known as collaborative writing (e.g., Grief, 2007; Andrews & Caster, 2008; Fung, 2010). Collaborative writing is identified as writing involving two or more writers working together to produce a single piece of work. It is different from other forms of group work in writing class in which it encompasses every group member's effort and participation at every stage of the writing process from planning, composing, to revision (Fung, 2006). When writing collaboratively, each student may take responsibility for a different portion of the final text, and then each group member discusses and collect his/her work to produce the final text. The interaction in collaborative writing between writers aims at helping the writer improve his/her own writing skill (Harris, 1992).

Furthermore, Grief (2007) who compared between individual and collaborative writing, discovered that EFL learners who worked together in their writing showed better improvement in structure. He provided evidence in the form of two pieces of writing by the same learner. He also observed the learners' comment toward collaborative learning and the majority of them spoke positively about their experience of working with other learners on writing. In addition to the students' improvement in structure, he found that collaborative writing can improve students' interaction in the classroom, lower the anxiety associated with completing tasks, and raise students' self-confidence. In terms of social relationship, moreover, collaborative writing encourages the students to utilize a range of social skills that can help them foster a sense of accountability, cooperation, and community. It also increases motivation, risk-taking and tolerance among learners. Moreover, it demands students' reflective thinking since they can observe how other learners think and they can model their peers' thinking strategies and writing styles (Fung, 2010). Unconsciously, there is a process of transferring knowledge between the authors so that they can learn something new through observing their peer's experience in writing.

On the other hand, collaborative writing can be complicated since more than one author share what they think or feel is important, necessary, or intriguing. Therefore, it causes greater conflict among authors to reach an agreement in deciding the writing components. In addition, the more different the level among authors, the more complicated the conflict to face, for instance, the collaboration between student and teacher who are not at equal stages of their academic careers (Andrews & Caster, 2008).

Concerning those conflicts in collaborative writing that learners experience while having discussion with their group, some researchers proved that conflict and interaction within group members are affected by the selection of the group (Cady, 2011; Adodo & Agbayewa, 2011; Maftoon & Ghafoori, 2009; Mahenthiran & Rouse, 2000; Kuiken & Vedder, 2002; Andrews &

Caster, 2008). Kuiken & Vedder (2002) obviously indicated that the student's text quality was affected by a formation of unbalance group which they mentioned as students' language proficiency dynamic. It implicitly showed that teachers should consider pairs and group selection as the first step to create a successful collaborative writing in the classroom. They should decide the best group selection approaches carefully before starting the class. Hence the students will benefit maximally from their interaction with the other members.

The main question that is still remaining is how we should select the group. Some studies focusing on group selection method such as heterogeneous and homogeneous grouping in various educational fields have been conducted widely since 1990s to find out the effectiveness of these group selection methods (Cady, 2011; Adodo & Agbayewa, 2011; Maftoon & Ghafoori, 2009; Kian-sam, 1999; Webb, et al., 1997). Later it has become a controversial issue since each category has its own advantages and disadvantages.

Those who believed in heterogeneous grouping compare the school environment to a realistic work environment. They recognize that once students enter the work place they will be asked to work with people that have a wide variety of ages, abilities, aptitudes, etc. They also consider that the low ability and average ability students will benefit from peer interaction while the high ability students are able to reinforce their learning by teaching others (Kruse, 2011).

Furthermore, a group theory from Johnson & Johnson (2009) positively supports the heterogeneous grouping as the effective grouping method for collaborative learning. They state that it is best if heterogeneous groups are formed to maximize learning. Some of the benefits of assigning students in heterogeneous group include enhancement of social behaviors and improved self-esteem, attitudes toward school and acceptance of differences. Students tend to have higher self-efficacy about their chances of being successful. Moreover, Mahenthiran & Rouse (2000), Kuiken & Vedder (2002), and Oakley (2002) propose the heterogeneous ability group composition as a well-function and the most effective group in collaborative learning which consists of students with different ability levels. Oakley (2002) believed that these group members are able to provide benefits for other members (e.g., strong and weak students, high ability and low ability students, etc). A weak student gets the benefit of seeing how a strong students learn and she/he may also get an individual tutoring, while the strong students who do the tutoring may benefit even more by recalling information she/he's already perceived and sharing it with the other students. Besides, Mahenthiran & Rouse (2000) suggests that teachers should intervene to balance the groups to include high and low ability students. The performance of high ability students might improve even more if they are grouped with low ability students. The low ability students can learn from their high ability peers. Thus, if teachers balance the group abilities and establish an environment that is comfortable for students' learning, performance and learning are likely to increase for all students.

In addition to those notions, a research finding proves that the heterogeneous ability group is significantly better in improving the students' achievement. Cady (2011), who investigated the effect of implementing heterogeneous writing in a fifth grade classroom, revealed that heterogeneous writing groups can lead to improvement in writing amongst all students. The students displayed various achievements and the levels of achievement were not biased towards one academic group; higher level learners, average level learners, and lower level learners all made great improvement in writing based on this implementation. Besides, the classroom community was strengthened in which the students were continuously asking if they could work in groups together.

On the contrary, supporters of homogeneous groups believe that homogeneous grouping allows students to achieve in faster rate to continue to progress without being held by slower learning rate of other students (Kruse, 2011). Moreover, Adodo & Agbayewa (2011) discovered that the homogeneous ability level grouping was superior than mixed ability grouping. The average- and lowability students benefited academically from homogeneous grouping than the heterogeneous group. Besides, The students' interest to learning was also boosted and sustained in the homogenous ability level grouping class.

Other studies comparing heterogeneous and homogeneous group show that these grouping methods are beneficial for students in different ability level. Most of them discovered that only high ability students benefit from homogeneous group while everage and low ability students performed better in heterogeneous group. Kian-sam (1999) indicated that high ability students performed better in homogeneous than in heterogeneous groups while low ability students performed better in heterogeneous than in homogeneous groups. Similarly, Smieja (2012) showed that high-ability students in homogeneous groupings had higher gains in achievement when compared to their counterparts in heterogeneous groupings, but these gains were not statistically significant. On the other hand, average-, and low-ability students did show statistically significant gains in achievement in the heterogeneous groupings. In addition, Webb, et al. (1997) showed that above-average students performed equally well both in heterogeneous and homogeneous group while below-average students in heterogeneous group produced higher score than those who were in homogeneous group. Although those researchers proved that heterogeneous and homogeneous were able to imprpove the students' writing skill, Maftoon & Ghafoori (2009) found that both groups were not significantly different in the writing tasks.

This controversial issue dealing with the effectiveness of heterogeneous and homogeneous ability group becomes the main concern of this present study as well as the interaction between the grouping methods and the level of achievement (high and low achievers). Moreover, the previous researchers investigating these grouping methods as mentioned previously, conducted their study in various educational fields (e.g., science, social, language, etc) and only few of them focused their study on the collaborative writing (e.g., Maftoon & Gafoori, 2009; Cady, 2011). Therefore, this present study aimed at examining the effect of heterogeneous and homogeneous grouping in collaborative writing on the students' writing skill. Both grouping methods are compared to see which method is superior to the other and perceived to be the best group selection method to implement in collaborative writing class. The other issue that was investigated further was the students' views concerning heterogeneous and homogeneous grouping in collaborative writing.

Method

The main purpose of this study was to examine the effect of working in heterogeneous and homogeneous pairs on the students' writing skill to see which method was superior than the other. It was hypothesized that the participants working in heterogeneous group showed better writing skill than those working in homogeneous group. For the purpose of statistical analysis, this hypothesis was transformed into null hypothesis: "there was no significant difference between the heterogeneous and the homogeneous group". In this research, the null hypothesis was tested using .05 ($p = 0.05$) level of significance with two-tailed test.

Furthermore, this present study employed quasi-experimental design which didn't require the researcher to select the sample randomly. The preference of this design was based on the campus system which didn't allow the researcher to decide to which classroom the students were

assigned. Therefore, the intact groups, class A and class B of writing class were taken as the subjects of the research. These two classes were relatively equal in terms of English writing achievement that was reflected in their pretest result. This research design was mentioned further in Ary et al. (2010) as *Nonrandomized Pretest-Posttest Design*, in which the subjects were given a pretest on the dependent variable (essay writing test) (Y_1), while heterogeneous (X_1) and the homogeneous pairing (X_2) were applied for three sections as the treatment. After that, the two groups were given a post-test on the dependent variable (Y_2).

Before conducting the experiment, the methods that should be undertaken by every group during the study were determined by drawing a lottery. The participants in class A worked in homogeneous pair while class B worked in heterogeneous pair. After that the researcher gave the students a basic concept of a descriptive essay because they were not taught about it yet. Then the pre-test was administered and analyzed to see the students' homogeneity. It measured the students' initial mastery of writing to ensure that the two groups were not significantly different. Then the students in both groups were assigned to write three descriptive essay texts in pair. Then the post-test was administered to measure the students' writing achievement after the experimentation. Finally, the difference between both groups' post-test average scores were compared to see the effect of grouping methods on the students' writing skill and to investigate which method was superior than the other.

In the pre-test and post-test the students were assigned to compose a descriptive essay individually although the students did it collaboratively in the experimentation process. It was intended to see if the collaborative writing helped every student to improve his/her own writing skill. Besides, the topics for the post-test were different from the pre-test to prevent the students from writing the same essay as they wrote in the pretest.

The Subjects of this study were two classes of fourth semester students of undergraduate program in English Department of State Islamic University of Malang (UIN Maulana Malik Ibrahim Malang), East Java Indonesia. Those students (about 18-22 years old) were enrolled in an English writing class II and had already passed several basic courses in grammar and paragraph writing. Besides, a week before the research was conducted in these classes, they had already learned about narrative essay. The preference of choosing the sample in this campus was because this present study was delimited to investigate the effect of the treatments on the students' ability to write a descriptive essay. Besides, the researcher demanded to find an equal number of students in the two classes and the accessible institution for this purpose was UIN Maulana Malik Ibrahim Malang.

These two classes were taught by the same lecturer to make sure that the teaching procedure and materials for both classes were the same before treatment. Then, they were also exposed to the same teaching procedure and materials during the treatment. The only difference was the group selection method, the homogeneous group and the heterogeneous group.

Before assigning the students in pairs, both classes were selected randomly as homogeneous or heterogeneous group. From that step, class A was determined as the homogeneous group and class B as the heterogeneous group. The number of high and low achievers in the heterogeneous group (10 high achievers and 10 low achievers) were as the same as in the homogeneous group (10 high achievers and 10 low achievers). The consideration for the criteria was adopted from the campus education guideline (2010). All students who scored between 75-100 were considered "high-achiever" and all students who scored between 50-74 were considered "low-achiever".

After determining the students' level of achievement, all participants in both groups were listed based on that criteria (high achiever and low achiever). For the heterogeneous group, one high achiever and one low achiever were randomly selected from the list as a pair while for the homogeneous group two high achievers were selected as a pair and two low achievers were selected as the other pair. When the students' ability didn't allow the prescribed one and one separation, a student of the closest ability score was chosen to replace the desired ability position.

Once the students' ability category was discovered, the heterogeneous pair was formed by dividing the students into a group of 1 high and 1 low ability student. The heterogeneous group model was showed in Figure 1.

Figure 1. The Heterogeneous Pair Model

The other group was formed homogeneously by dividing the students into two kinds of groups, those were high achiever group (2 high ability students) and low achiever group (2 low ability students). The group model was showed in Figure 2.

Figure 2. The Homogenous Pair Model

This study required six meetings for each class and the research treatment was commenced in the third meeting. The first meeting was used to prepare them with a basic concept of descriptive essay and the second meeting was used for pre-test. In the treatment process, all the participants were given the same daily work and classroom procedures in order to control other variables that existed within a classroom. The similar activities were conducted as a form of training for the pairs to write collaboratively.

During the collaborative writing, the students composed three descriptive essays. Before writing the texts, the researcher described the collaborative writing process to the students. When collaborative writing tasks were assigned, each group received a packet of instrumentation form designed to facilitate the collaborative process as well as to help them to make an outline, compose, revise, and publish their essay during the process of working together. The topics for every writing text were provided by the researcher. The general steps of collaborative writing was explained in the table 1.

Everytime the students finished and collected their writing text, the researcher provided feedback on the draft concerning the content, organization, language use, vocabulary, and the

mechanic. It encouraged the students to realize their errors and write their next draft better than before.

Result

Table 2 shows the mean score of homogeneous pairs (78.3750) and the S.D (8.35), the mean score of heterogeneous group (88.3750) and the S.D (3.64). The level of significance to reject the null hypotheses was set to be 0.05 and the t-critical value in that level is 2.024. It shows the t-calculated is 4.818 (higher than 2.024). It means the t-test result is significant at 0.05 critical levels and the null hypothesis is thereby rejected. From the result we can conclude that heterogeneous grouping is significantly better than the homogeneous grouping. It indicates that the students working in heterogeneous group achieved better writing skill than those in the homogeneous group.

Since the t-test result discovers that the homogeneous group was significantly different from the heterogeneous group, an independent sample *t* test was run to investigate whether there was an interaction between the grouping methods and the different levels of achievers.

Table 3 shows the mean score of the high achievers in homogeneous group (82.12) and the S.D (8.54), and the mean score of high achievers in heterogeneous group (88.56) and the S.D (3.64). Similar to the overall post-tests analysis, the level of significance to reject the null hypotheses was set to be .05. The degrees of freedom is 18 and the critical value in this level is 2.10. It shows that the obtained *t* value is 2.069 (lower than the critical value, 2.10). The result signifies that there is no statistically significant difference between the high achievers in homogeneous and heterogeneous group in terms of post-tests differences.

Table 1. The Procedure of Collaborative Writing

Writing Stage	Students' Activities
Planning	<ul style="list-style-type: none"> - The pairs discussed the given situation dealing with the topic. - The pairs shared ideas and brainstormed the target topic and organized the information together. - The pairs formulated a draft thesis or argument.
Drafting/writing	<ul style="list-style-type: none"> - Separately (each student had his/her own portion of writing to do) <ul style="list-style-type: none"> • After planning and making an outline, the students divided the writing task equally. For instance they wanted to compose a four-paragraph essay, then every student had to write two paragraphs. • The researcher explained to the students that brainstorming the main points of their paper as a group was helpful, even if separate parts of the writing were assigned to individuals. They had to be sure that everyone agrees on the central ideas. • While writing, the student may ask his/ her friend if they find any difficulties. - Together (the group actually composed text collaboratively) <ul style="list-style-type: none"> • The pairs discussed and decided where their individual

	<p>writing fit into the whole document.</p> <ul style="list-style-type: none"> • The pairs had to make sure that the finished document had one cohesive voice. • The pairs might get all of the ideas down on paper in a rough form before discussing exact phrasing.
Revising, editing, and proofreading	<ul style="list-style-type: none"> - Although the pairs drafted parts of the document separately, they had to merge their ideas together into a single document first, then focus on meshing the styles. The first concern was to create a coherent product with a logical flow of ideas. Then the stylistic differences of the individual portions had to be smoothed over. - Revising: The pairs revised the ideas and structure of the paper before worrying about smaller, sentence-level errors (like problems with punctuation, grammar, or word choice). Is the argument clear? Is the evidence presented in a logical order? Do the transitions connect the ideas effectively? - Editing and proofreading: Checking for typos, spelling errors, punctuation problems, formatting issues, and grammatical mistakes.
Publishing	<ul style="list-style-type: none"> - After they revised and checked all components as mentioned in the previous step, then they were ready to publish their draft. - For the first draft, the student A wrote the final draft in the instrumentation form. - Work on the second draft, student A and B switched role for this part. That was, this time student B had to write the final draft. For the next writing assignment, if a student was already assigned the role of A, they then assumed the role of B and vice versa, to ensure fairness.

Table 2. The t-test Result of the Students' Post-test in Homogeneous and Heterogeneous Group

Grouping	N	Mean	SD	df	t	Sig. (2-tailed)	Std. Error Difference
Homogeneous Pair	20	78,37	8,539	38	4,818	,000	2,07576
Heterogeneous Pair	20	88,37	3,640				

Table 3. *t*-test Analysis of the High Achievers' Posttests in Homogeneous and Heterogeneous Group

Grouping	N	Mean	SD	df	t	Sig. (2-tailed)	Std. Error Difference
High Achievers in Homogeneous Pair	1 0	82.12 50	8.7311 3	18	2,069	.053	3.111429
High Achievers in Heterogeneous Pair	1 0	88.56 25	4.5362 1				

Similar to the high achievers in both groups, investigating the low achievers also applied the same procedure of data analysis. Table 5 shows the mean score of the low achievers in homogeneous group (74.19) and heterogeneous group (88.19). For the low achievers analysis, the degrees of freedom for interaction are the same as the high achievers (18). Therefore, the same critical value of *t* is required (2.10). It shows the obtained *t*-value (5.67) is greater than 2.101. It means there is an interaction between the grouping methods with the low achievers at the .05 level.

Table 4. *t*-test Analysis of the Low Achievers' Post-tests in Homogeneous and Heterogeneous Group

Grouping	N	Mean	SD	df	t	Sig. (2-tailed)	Std. Error Difference
Low Achievers in Homogeneous Pair	1 0	74,18 75	7,318 70	18	5,673	,000	2,46767
Low Achievers in Heterogeneous Pair	1 0	88,18 75	2,707 53				

Discussion

The overall result of this study signifies that the heterogeneous grouping method is better than the homogeneous group to promote the students' writing skill. Furthermore, The finding

about the high achievers in both groups indicates that there is no significant difference between the homogeneous and the heterogeneous group. It means that the grouping methods doesn't affect the high achievers' writing skill. On the other hand, the finding on the low achievers shows that the participants in the heterogeneous group is significantly better than their counterparts in the homogeneous group. There is an interaction between the heterogeneous grouping and level of achievers. It clearly indicates that the heterogeneous grouping method only affects the low achievers' writing skill.

Besides, the students' reflection about the grouping methods and the peers was viewed to obtain further information about the reasons why the heterogeneous grouping method is better than the homogeneous grouping. The reflection addressed to the participants' preference shows that generally the participants in each group perceived differently on the collaborative work and the peers and that information.

The Students' Preference

The majority of the students preferred writing alone to collaborative writing. One possible explanation is that the collaborative writing took longer time planning, drafting, editing, and revising than individual writing. The students spent a long time to discuss the essay with their partner since sometimes they had to settle their different ideas and points of view. In fact, this finding contradicts Cady's finding (2011) that all participants spent shorter time composing their draft compared to individual writing.

However, all students in heterogeneous group felt comfortable working together with their peer, while some students in homogeneous group were not pleased to work collaboratively. The more positive the attitude of the participants, the more positive their behavior in the collaborative work is. Therefore, the interaction occurring between pairs in the heterogeneous group encourages them to work maximally on the given task, while some participants in the homogeneous group who feel uncomfortable working together might put little contribution to the task which then affects the task quality.

The Students' Belief

More students in the heterogeneous group believe that collaborative writing motivates them to produce a better essay, stimulates their thinking, and improves their confidence to write. However, some students in homogeneous do not feel the same way. They couldn't improve their confidence to write. Hence this case might affect their critical thinking to write which, in turn, does not benefit them to improve their writing skill.

Regarding the benefit of the writing aspects, most of the students in the heterogeneous group believe that they could learn new things such as the partner's writing strength, different writing style, some writing aspects that they have never had/ known. However, some students in the homogeneous group claimed that although they worked with their partner, they still could not learn their partner's writing strength or style.

This finding supports Fung (2006) that working with pair from the same background may have the same level of thinking and perspective which does not motivate the students to write better. So it is better to have people from different level of achievement to learn something new from others. Therefore, once the students perceive that the collaborative work and the pair interactions are beneficial for their writing skill, they know what they will learn from the others and strive to achieve it.

Social behavior

Social behavior concerned with the group harmony and politeness. More than fifty percent of the students stated that they complimented and helped each other, recognized and valued the partner's contribution, and every group member could work along together. Nevertheless, several students in homogeneous group responded that sometime the group member didn't respect their peer.

Besides, It was stated in the open ended questionnaire that some students in the heterogeneous group illustrated their peer as a kind, friendly, hard worker, and good writer companion. On the other hand, more homogeneous pairs found their peer were lazy, annoying, little helpful, and playing around. Sometimes they should work alone and harder since their peer was too busy talking to other members or too lazy to contribute to the group work. Therefore, these factors probably obstructed the collaborative writing to function effectively and optimally.

Work equality

A few students in both groups (mostly in homogeneous group) found that their partners still depended on them all the time. Some participants in the homogeneous group complained about their partner who only provided little contribution and some did not even want to cooperate at all. Therefore, they did not have a choice but to work alone while the other members were busy doing their stuff such as using mobile phone, playing around, etc. This unequal portion of task might be felt by the students in homogeneous group who had low motivation and respect. The lack of involvement made it harder for the group to cohere. As a result, the members in the homogeneous group did not work as closely with one another as those in the heterogeneous group.

Similar finding has been reported in Mathematics classroom setting regarding the high and low achievers' achievement in heterogeneous group. Smieja (2012) compared the gain score of participants in homogeneous and heterogeneous grouping. She discovered that the different gains between high-ability students in homogeneous and heterogeneous grouping were not statistically significant. On the contrary, the average and low-ability students did show statistically significant achievement gains in the heterogeneous groupings. In addition, Kian-sam (1999) also found that the low ability students performed better in heterogeneous group than those in homogeneous group. However, he stated a different result from this present study that the high ability students performed slightly better in homogeneous group than in those heterogeneous group.

In science, Webb, et al. (1997) found similar result regarding the high and low achievers grouped heterogeneously or homogeneously. They compared below-average students who worked in group with above-average students (heterogeneous group) to below-average students without above-average students (homogeneous group). They discovered that the below-average students in heterogeneous group showed better improvement than their counterparts in homogeneous group. Besides, they also supported the findings of this present study about the high and the low achievers in which the high achievers performed equally well both in heterogeneous and homogeneous group while the low achievers in heterogeneous group produced higher score than those who were in homogeneous group.

A study investigating the effect of heterogeneous and homogeneous collaborative interaction on the EFL learners' writing skill (Maftoon & Gafoori, 2009) discovered that this grouping method affected positively on the students' writing achievement. However, the results showed that both groups, very similarly, had significantly higher post-test scores in all three

writing tasks. Unfortunately, they didn't explain further which grouping method was superior to the other. They also didn't investigate the effect of the grouping methods on the students in different proficiency level.

The distinct result of comparison between homogeneous and heterogeneous group was declared by Adodo & Agbayewa (2011) in science setting. They discovered that the homogeneous group constantly produced higher gain than heterogeneous group. He also claimed that average and low ability students benefited academically from homogeneous group more than the heterogeneous group. They stated that homogeneous ability grouping helps students to develop positive attitude to science subjects, the school and themselves. The students' interest to learning is also boosted and sustained in the homogenous ability level grouping class.

Conclusion and Recommendation

The study found that the students in the heterogeneous group constantly showed better performance than those in homogeneous group. Besides, the homogeneous and heterogeneous grouping had a differential effect on students learning. Using heterogeneous writing group was more beneficial for promoting the students writing achievement in their different ability level than homogeneous group.

The analysis on the high achievers in homogeneous and heterogeneous groups indicated that their achievement was not significantly different, while the analysis on the low achievers found that there was significant difference between the achievement of the low achievers in heterogeneous and homogeneous group. The low achievers in heterogeneous group gained higher score in their post-test compared to their counterparts in the homogeneous group. It signifies that the heterogeneous grouping only affected better to the low achievers' writing skill.

Furthermore, the reasons why homogeneous grouping did not affect all participants were because they believed that they couldn't learn more from their partner since they were in the same ability level. Besides, the lack of language proficiency members prevented the group from producing a high-quality essay. The students had difficulties expressing their ideas in the target language. The group members struggled to structure sentences and they could not present their ideas fluently and coherently as intended. The quality of their essay was partially limited by their language abilities.

Another possible explanation that might influence the students' manner was the group selection. In this study, the groups were formed based on their prior level of achievement. In fact, several students in the homogeneous group kept asking to change their group member since they were not familiar with their pair. They wanted to work with someone else whom they felt more comfortable with. Fung (2006) concurred that familiarity and connection with members are important because these factors provide a safe and conducive environment for members to express their ideas and opinions openly.

On the other hand, The heterogeneous grouping method helped the students to develop positive attitude to the task. The students in this group exhibited greater self-confidence, self-esteem, and interest to learning. The better learners had opportunities to provide assistance to less proficient members and less proficient members got the benefit from the tutoring and saw how good the better learners were. From this case we could draw a conclusion that the possibility of learning new knowledge for the high achievers was lower than the low achievers. The high achiever probably could not learn different aspects from their peer since they were better in proficiency level.

This present study contributes to theoretical and practical implication. For the theoretical implication, the findings provide support for the claim of a group theory by Johnson & Johnson (2009) that pairing the students with their friends in different ability level is a very effective grouping method. It doesn't only help the students improve their academic achievement, but also their social behaviors. The students tend to have higher self-efficacy about their chances of being successful, acceptance of differences, and sense of cooperation and community. In addition, the findings of the present study add the growing body of research (e.g. Webb et al, 1997; Mahenthiran & Rouse, 2000; Kuiken & Vedder, 2002; and Oakley, 2002; Cady, 2011) which have shown the effectiveness of interaction between learners who had different proficiency level.

Concerning the practical implication, it obviously indicates that peers with different proficiency levels can benefit from working with another. The weak students get the benefit of seeing how good the strong students and they may also get some individual tutoring, while the strong students who do the tutoring may benefit even more by recalling information they've already learned and shared with the other students. It shows that social mediation comes not only from teachers but also from peers with more or less proficiency. Therefore, teachers should intervene to balance the groups and not assume that grouping different proficiency peers is not conducive to L2 learning.

This present study recommends some suggestions for teachers concerning the positive effect of heterogeneous pair on the students' writing achievement. Although the result confirms that the heterogeneous pairs showed better writing skill than homogeneous pairs, teachers should understand the factors that influence students to interact in a certain way. Some students probably don't want to contribute in the collaborative work or encounter difficulty to express their ideas in writing. Hence teachers should prepare them by explaining the benefit of working together.

The present study can also offer some suggestions for further research. An investigation is required to examine the effect of heterogeneous and homogeneous pair on the writing achievement of students in other writing texts such as narrative, expository, argumentative, in other learning skills, such as in speaking or reading skills, and in different aspects like different gender.

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