



The Effectiveness of Brainstorming and Mind Mapping to Teach Writing Narrative Text for Students with Extrovert and Introvert Personalities

Widya Yuliani[✉], Dwi Anggani Linggar Bharati, Warsono

Universitas Negeri Semarang, Indonesia

Article Info

Article History:
 Recived 12 March
 2019
 Accepted 29 July
 2019
 Published 23
 December 2019

Keywords:
 Brainstorming, mind
 mapping, writing,
 narrative text,
 students' personalities

Abstract

Teaching English in SMA is teaching and learning a foreign language as a part of national education. Moreover, modern teaching technique should be developed to encompass the reality. This study aimed to measuring the effectiveness of brainstorming and mind mapping to teach writing narrative text with extrovert and introvert personalities. This research used 2x2 factorial experimental designs. The subjects were the students of class XI IPA 1 and XI IPA 2 of SMAN 2 Tegal. It was divided into two groups, they were extrovert and introvert personality. The instruments were used test, questionnaire, pre-test, and post-test. The finding of this research indicates that brainstorming technique was more effective than mind mapping technique to students with extrovert personality. While there was no significant difference between a student who was taught by using brainstorming technique and those taught by using mind mapping technique with introvert personality. It means that brainstorming technique is more effective to the students with extrovert personality, while mind mapping technique is effective to the students with introvert personality. Based on our findings, we conclude that both brainstorming technique and mind mapping technique can help and improve the students in writing skill for both students with extrovert and introvert personality.

© 2019 Universitas Negeri Semarang

[✉]Correspondence Address:

Kampus Universitas Negeri Semarang, Kelud, Semarang, 50233

E-mail: widyayuliani93@gmail.com

INTRODUCTION

As one of the language skills, writing is one of the skills of communication, which can help us to express our idea, feeling, and opinion in written language. Writing becomes a difficult subject especially for students because writing is the activity when someone expresses his/her idea, emotion, thought and transfers them into a piece of paper. Harmer (2004), the teaching of writing focused on the written product rather than on the writing process. In other words, the students tend to do *what* rather than the *how* of text construction.

Besides, the passive students are having more difficulty in their writing. Most of the students experience the writers' anxiety. They also feel nervous to express their opinions in writing. Thus, it can be concluded that students have a feeling of fear and little enthusiasm in writing class. The passive students prefer to remain silent. While, the active students often communicate with teachers and friends. Therefore, this can lead to two different personality types namely extrovert and introvert personalities.

According to the standard competency in the syllabus of senior high school, the students are expected to be able to write various texts. Among the texts, the narrative text should be learned in Senior High School. A narrative text is usually used to introduce several stories and deliver them to readers.

The researcher has read some similar studies related to brainstorming technique that have been conducted by Hermasari (2015), Sabarun (2015), Erlin (2015), Emidawati (2017), and Abdelkarim (2018). The previous studies were conducted using only the brainstorming technique or compared with another technique. They conducted studies on speaking or writing ability. The result of the studies showed that brainstorming could improve the students' ability.

Rofi'i (2014), Rahmawati (2017), Anggrayani (2015), Muhib (2014), and Sari (2018) had conducted a study using mind

mapping in different ways but with the same goal, that was to find out the effectiveness of mind mapping technique. Generally, the results of their research stated that by implementing mind mapping, the students were actively involved in the teaching-learning process.

Then, the previous study was about students with extrovert and introvert personalities that was conducted by Akbar (2015), Valentine (2017), Mall-Amiri (2013), Priska (2016), Sri, et al (2017), Rahmawati and Nurmayasari (2014). The previous studies investigated significant differences among personality types in students' achievement. Based on the result of the research, it was proved that the students with introvert personality have better results in the reading comprehension test than those with extrovert personality.

Their previous studies could be used as practical guidance for our study, because it was relevant with our present study especially in terms of brainstorming, mind mapping, and students' personality. However, this research was different from the previous studies above. This research focused on the interaction between techniques and students' personality.

In conclusion, from the discussion above, it can be seen that brainstorming and mind mapping techniques that should be implemented by the teacher in the teaching and learning process can influence the students' learning outcomes. Thus, in this study, the researchers tried to conduct the research about brainstorming and mind mapping techniques especially to teach writing narrative text with extrovert and introvert personalities.

METHOD

This research was used 2X2 factorial design with pre-test and post-test. There were 45 students of the eleventh grade students of SMAN 2 Tegal. Two classes were chosen as experimental group 1 and 2, while the third class was chosen for tryout.

This study was used numerical data and analyzed using numerical comparisons and statistical packages for social science (SPSS). The quantitative data in this study were taken from try out, pre-test, post-test, and questionnaire sheet. Those test were conducted in the form of writing test. The experimental group 1 and 2 had the similar test. The pre-test was used to measure students' writing before the treatment and the post-test was used to measure students' writing after the treatment. The questionnaire was used in this research based on Eysenck Personality Inventory (EPI). Thus, the researcher could classify the students into extrovert and introvert personality.

After collecting the data, the researcher analyzed the students' result of pre-test and post-test by using t-test was used to test the result of teaching writing narrative text by using brainstorming and mind mapping techniques to students with extrovert and introvert personalities. While, ANOVA test was used to check the relationship between variables which differ from one another.

RESULTS AND DISCUSSION

The purpose of the research was to know the effectiveness of brainstorming technique compared with mind mapping technique in teaching writing narrative text to the students with extrovert and introvert personalities of eleventh grade students of SMAN 2 Tegal. In this study, there were two different groups namely first experimental group, i.e. XI IPA 1, conducted with brainstorming technique and the second experimental group, i.e. XI IPA 2, conducted with mind mapping technique. This section presents the discussion of the whole results of the study. The statistical analysis was used to answer research questions and hypothesis test.

Before conducting the study, there were two tryouts initiated to describe the validity and reliability of the test. Both participation questionnaire and writing test were conducted in the try out. The result shows that all of

items in the questionnaire were reliable. However, some of those items were invalid. Thus, the invalid items were dismissed. Meanwhile, the result of the writing test try out was valid and reliable.

After dividing the class into two groups, experiment class one and experiment class two, the students got the pre-test. In here the pre-test was used to determine whether the writing ability of both classes was same. The students also should answer the questionnaire in order to know their learning style. After getting the pre-test, the students got the treatment. Experiment class one got the treatment by using brainstorming technique and experiment class two got the treatment by using mind mapping technique. After the treatment had been given to the students, the researcher gave post-test.

Then, the normality was conducted to know whether the data is distributed normally or not. The normality test was used One-Sample Kolmogorov-Smirnov Test by SPSS. The result showed that the significance values of the pre-test score were higher than 0.05 (0.649, 0.595, 0.149, 0.935 > 0.05). It means that the data in pre-test was distributed normally. So, the null hypothesis was accepted. Therefore, it can be concluded that pre-test data of both experimental groups have a normal distribution.

Meanwhile, the result of the normality test of the post-test showed that the significant values of the post-test score was higher than 0.05 (0.1000, 0.987, 0.377, 0.840 > 0.05). It means that the data in post-test was distributed normally. So, the null hypothesis was accepted. Therefore, it can be concluded that post-test data of both experimental groups have a normal distribution.

Then, the homogeneity test was used in order to know whether the data is homogeneous or not. It was as important as normality test because it showed the similarities of the writing skill between students of experiment class one and those of experiment class two. If the data was not homogeneous, the treatment cannot be applied

because it means that the groups do not have the same skill in writing a text. In here, the homogeneity test was measured by using statistical analysis called Levene Test of Homogeneity of Variance.

The result of homogeneity test of pre-test for students with extrovert and introvert personalities showed that the significance score (Sig) was 0.366. Meanwhile, the result of homogeneity test of post-test for students with extrovert and introvert personalities showed that the significance score (Sig) was 0.291. Each of it was higher than level of significance (α) = 0.05. As the result, H_0 was accepted. Therefore, the data of the pre-test and post-test for students with extrovert and introvert personalities in both experimental groups were homogenous.

To answering the research questions this part to be discussed the hypothesis test. The explanations were as follows.

Teaching Writing Using Brainstorming to Students with Extrovert Personality

The results showed that there was a significant difference between students writing skill in pre-test and post-test. The mean score of pre-test (69.50) was lower than the mean score of post-test (75.00). It means that the students with extrovert personality have the high score and showed improvement. It was also supported by t-value. T-value was higher than t-table. It showed that $0.014 < 0.05$. Therefore, H_0 was rejected and H_a was accepted. It means that using brainstorming technique was effective to enhance writing skills of students to extrovert personality.

Extrovert personality is someone's personality that is more sociable to others. They have many friends and want to be happy and like to go to the parties. The people who have the extrovert personality are sensation-seekers and risk-takers. They like jokes, energetic, and more active. Someone who is extraverted, he hypothesized, has good, strong inhibition (Eysenck, 1947).

The results gave a sign that brainstorming gives positive effect to students'

writing narrative text because it provides many opportunities for students to work with others and more active in class. It was in line with Jung (1971) argued that extraverts are open, sociable, and socially assertive, oriented toward other people and the external world. Thus, it would be better for students to study in group because they enjoy social activities such as being around and working with others.

Teaching Writing Using Brainstorming to Students with Introvert Personality

The mean score of pre-test result of students with introvert personality who were taught by brainstorming was 64.58. While, the post-test mean score result for this group showed that there was also significant improvement. It means that brainstorming was also effective to teach writing narrative text for students with introvert personality. It was also supported by t-value result. It can be seen that the significant value was 0.000. It showed that $0.000 < 0.05$. Therefore, H_0 was rejected and H_a was accepted.

As stated also by Jung (1971) who said that introverts are withdrawn and often shy, and they tend to focus on themselves, on their own thoughts and feelings. They did not like being in crowded situation because they need to concentrate well. It seems that they need full concentration because they were easily distracting especially from the noisy. Moreover, the students who had this personality prefer to learnt individually and independently.

Teaching Writing Using Mind Mapping to Students with Extrovert Personality

Based on the statistical analysis result, students with extrovert personality perform different result on their post-test compared to their pre-test. The mean score of post-test result of students with extrovert personality who were taught by mind mapping was better than the pre-test mean score. Moreover based on table 4.17 showed that using mind mapping technique was effective to enhance writing skills of students with extrovert personality.

As stated by Buzan (2007), a mind map was the easiest way to put information into your brain and to take information out of your brain. Therefore, the students enjoy to write a text and they develop their ideas freely. In addition, Buzan in Tee (2014) argued that mind mapping was an efficient system of notetaking that makes revision a fun thing to do for students.

Teaching Writing Using Mind Mapping to Students with Introvert Personality

Students mean score before and after treatment showed significant difference based on the statistical analysis. Their post-test (73.29) was better than pre-test (65.00). It was also supported by t-value result. It can be seen that the significant value is 0.001. Therefore, H_a was accepted and H_o was rejected.

According to Buzan in Ernidawati (2017), mind mapping was a graphic representation of ideas (usually generated via brainstorming session). It showed the ideas which were generated around a central theme and how they are interlinked. It was a tool primarily used for stimulating thought.

It was line with Davis in Vitulli and Giles (2016) argued that mind mapping is a unique representational strategy, which appears to have particular educational benefits, since pictures and structured diagrams are more comprehensible than just words and a clearer way to illustrate understanding of complex topics. It was hoped that mind mapping strategy can be implemented in teaching and learning writing by the students especially with introvert personality and the teacher.

Teaching Writing Using Brainstorming and Mind Mapping to Students with Extrovert Personality

The results showed that there were significant improvement by using brainstorming and mind mapping to students with extrovert personality. The mean score of brainstorming (75.00) was higher than the mean score of mind mapping (66.53) to

students with extrovert personality. This result was also supported by t-value. Where t-value (0.008) was less than 0.05. Therefore, H_o was rejected and H_a was accepted. It means that brainstorming technique was more effective than mind mapping technique to use in teaching writing to the students with extrovert personality.

It was line with Muhib's (2014) argument that everybody-writes technique was more effective than mind mapping technique for teaching writing. However, this study compared by using brainstorming and mind mapping techniques. The result was also the same. Brainstorming was more effective than mind mapping technique to teach writing narrative text with extrovert personality.

The result represents that brainstorming gives meaningful contribution for generating ideas, increasing creative efficacy, or finding solutions to problems in individual or group method (Wilson, 2013).

Teaching Writing Using Brainstorming and Mind Mapping to Students with Introvert Personality

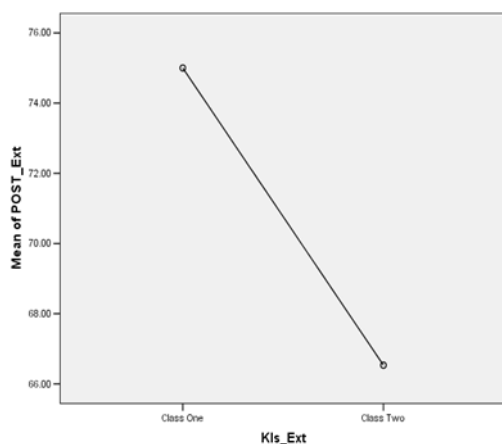
The result showed that there was no significant difference between students who were taught by using brainstorming technique and those taught by using mind mapping technique to students with introvert personality. It can be seen from the significant value (0.823) in table 4.24 was more than 0.05 which means there was no significant difference.

Jung in Schultz and Schultz (2009), everyone has the capacity for both attitudes, but only one becomes dominant in the personality. In addition, Jalili and Amiri (2015) argued that introverts prefer spacious interactions with fewer people. Introversion personality characteristics were focus on themselves, stolid, less in communication, passive, like being alone, and independent. Therefore, to teach introversion learners, the teacher was recommended to give them the task individually because they usually do not really like work in group.

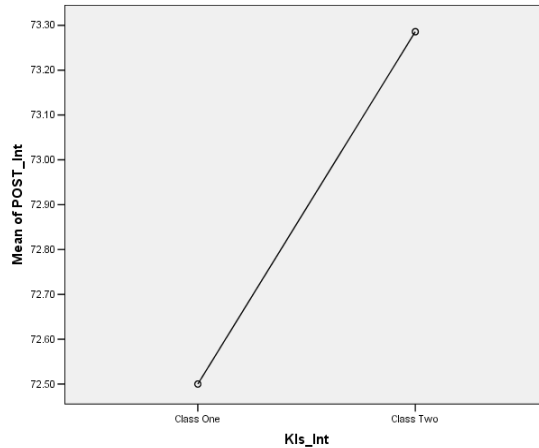
The Interaction Effect among Techniques, Students' Personality, and Writing Skill

This part discusses about the interaction among the techniques, students' personality, and writing skill. From the calculation, the significant value (0.45) was higher than 0.05. It means that there was no interaction among brainstorming and mind mapping techniques, students' personality, and writing skill. The finding of this research indicates brainstorming technique was more effective to teach the students with extrovert personality, while mind mapping technique was effective to teach the students with introvert personality.

Furthermore, Alavinia and Hassanlou (2014) who conducted the research which is similar to the researcher were found that there was no significant correlation between extroversion/introversion and their essay writing performance. Since students' personality was not permanent or changeable. Personality is too complex and changeable in different situation and with different people (Schultz and Schultz, 2009). In addition Harmer (2001) argued that one of the disadvantages of writing is getting students to concentrate and it takes time. In order to clear the finding of the mean score, here were the lines.



Picture 1. The Mean Score of Post-test to Students with Extrovert Personality



Picture 2. The Mean Score of Post-test to Students with Introvert Personality

CONCLUSION

Based on our findings, we conclude that both brainstorming and mind mapping techniques can help and improve the students in writing skill for both students with extrovert and introvert personalities. However, there were some weaknesses from both techniques. It can be seen that brainstorming technique was more effective than mind mapping technique to students with extrovert personality, while mind mapping technique was more effective to students with introvert personality than brainstorming technique. Thus, brainstorming technique was effective to be implemented with extrovert personality because students enjoy working with others. This technique should be done in group. While, mind mapping technique was easy implemented with introvert personality because they prefer to learn individually. They did not like crowded situation because they need full concentration. It is hoped that the students and the teacher can use those techniques in teaching and learning process.

REFERENCES

Abdelkarim, N. M. & Smadi, M. (2018). The Effectiveness of Using Brainstorming Strategy in the Development of Academic Achievement of Sixth Grade Students in English Grammar at Public

- Schools in Jordan. *Journal of Research Gate*, 11(3), 1-17.
- Akbar, A. J. (2015). The Impact of Extroversion and Introversion Personality Types on EFL Learners' Writing Ability. *Journal of Theory and Practice in Language Studies*, 5(1), 212-218.
- Alavinia, P., & Hassanlou, A. (2014). On the viable linkages between extroversion/introversion and academic iranian EFL learners writing proficiency. *English Language Teaching*, 7(3), 167–175.
- Anggrayani, M. (2015). Improving Students' Organizing Ideas in Writing Analytical Exposition Text With Mind Mapping Technique. *English Education Journal*, 5(1), 1-5.
- Brown, H. D. (2001). *Teaching by Principles: An Interactive Approach to Language Pedagogy* (Second). New York: Pearson Education, Inc.
- Buzan, T. (2007). *The Ultimate Book of Mind Maps*. Jakarta: Gramedia Pustaka Utama.
- Erlin, D.F. (2015). The Speaking Ability Taught by Using Brainstorming. *International Journal of Social Sciences*, 1(1), 669-680.
- Ernidawati, & Sutopo, D. (2017). Mind Mapping and Brainstorming Strategies in Students ' Writing with High and Low Interest. *English Education Journal*, 7(2), 164–168.
- Eysenck, H. (1947). *Dimensions of Personality*. London: Methuen.
- Harmer, J. (2001). *The Practice of English Language Teaching* (Third Edit). England: Longman.
- Harmer, J. (2004). *How to Teach Writing*. London: Pearson Education Limited.
- Hermasari, D. (2015). The Effectiveness of Online Brainwriting and Brainstorming Techniques in Teaching Writing to Students With Different Learning Strategies. *English Education Journal*, 5(2), 28-34.
- Jalili, S., & Mall-Amiri, B. (2015). The Difference between Extrovert and Introvert EFL Teachers' Classroom Management. *Theory and Practice in Language Studies*, 5(4), 826.
- Jung, C. G. (1971). *Psychological Types* (6 Edition). Princeton, N.J.: Princeton University Press.
- Mall-Amiri, B., & Nakhaie, N. (2013). Comparing the Performance of Extrovert and Introvert Intermediate Female EFL Learners on Listening and Reading Tasks. *International Journal of Language Learning and Applied Linguistics World*, 3(3), 11-29.
- Muhib, A., B, D. A. L., & Hartono, R. (2014). Mind Mapping and Everybody Writes Techniques for Students With High and Low Writing Achievement. *English Education Journal*, 4(2), 99–105.
- Priska, R., A. (2016). Comparative Study of Reading Comprehension Between Students With Extrovert and Introvert Personality at SMA N 2 Kalianda (*A Script*). Lampung: Lampung University.
- Rofi'i, A. (2014). Improving Students' Motivation in Writing Descriptive Texts by Using The Mind Mapping Technique. *English Education Journal*, 4(2): 114-121.
- Rahmawati, P.M. (2017). The Effectiveness of Mind Mapping-Silent Card Shuffle Combination in Teaching Writing Narrative Text. *English Education Journal*, 6(2), 155-164.
- Rahmawati, S., & Nurmayasari, E. (2014). A Comparative Study between Extroverted and Introverted Students and Their Speaking Ability. *A Script*. Bogor: Ibn Khaldun University of Bogor.
- Sabarun. (2015). The Effectiveness of Using Brainstorming Technique in Writing Paragraph Across The Different Level Of Achievement At The Second Semester English Department Students. *Proceedings of the 1st National Conference on English Language Teaching (NACELT)*.

- Sari, L., I. (2018). The Effectiveness of Vocabulary Self-Collection and Word Mapping Strategies for Teaching Vocabulary to Maritime Cadets With High and Low Metacognitive Awareness. *English Education Journal*, 8(1), 35-42.
- Schultz, D., & Schultz, S. (2009). *Theories of Personality*. Canada: Macmillan.
- Sri, D. W., Saputri, E., & Nurlinda, R. (2017). Extrovert and introvert students in speaking ability of English department at IAIN Palangka Raya. *Proceedings of the 1st INACELT (International Conference on English Language Teaching)*.
- Tee, T. K., Azman, M. N. A., & Mohamed, S. (2014). Buzan Mind Mapping: An Efficient Technique for Note-Taking. *International Journal of Social, Human Science and Engineering*, 8(1), 28–31.
- Valentine, B. S. (2017). The Effect of Teaching Methods and Students' Personalities on Students' Achievement in Descriptive Writing. *Journal of Education and Practice*, 8(28).
- Vitulli, P., & Giles, R. (2016). Mind Mapping : Making Connections with Images and Color. *Delta Journal of Education*, 6(2), 1–10.
- Wilson, C. (2013). *Brainstorming and Beyond: A User-Centered Design Method*. Morgan Kaufmann.