



Students' Engagement and Interest in Learning Writing Through Mind Mapping Technique

Wahyu

Wachyou92@gmail.com

Institut Agama Islam Negeri Bone, Indonesia

Received : 7 October 2019; Accepted: 29 November 2019

Abstract

The objective of this research was to find out whether the use of mind mapping technique is effective or ineffective in improving students' engagement and interest in learning writing. The researcher employed quantitative method with the quasi-experimental design. The research was conducted to the fourth-semester students of English Study Program of IAIN Bone. The data were collected by using observation checklist, writing test, and questionnaire. The data from observation checklist were used to find out students' behavioral engagement, in this case, students' participation in experimental group which was taught writing subject through mind mapping technique. The writing test was given twice for both experimental and control group to investigate the students' writing ability which shows students' cognitive engagement before and after the treatment was conducted. It can be concluded that the use of mind mapping technique in learning writing is effective to increase students' engagement and interest. Moreover, further analysis shows that students' behavioral engagement is higher than students' cognitive engagement and students' expressed interest increases higher than other types of interest due to the technique used which was mind mapping technique.

Keywords: Mind mapping technique, Engagement, Interest

Introduction

Writing is one of the skills which can help us to give information to the reader. According to Kirkpatrick & Klein (2009), writing is the ability to put pen and paper to express ideas through symbols. This way, representations on the paper will have meaning and content that could be communicated to other

Wahyu

Students' Engagement and Interest in Learning Writing through Mind Mapping Technique

people.

Writing is not an easy thing to do and it needs a lot of practices. In writing process, there are many things that have to pay attention. This includes prewriting process, drafting, revising and publishing. In addition, writing skill needs a knowledge of grammar, word choice, vocabulary techniques of writing, type of texts and general knowledge. These are so complex if we do not understand how to do it well.

IAIN Bone is one of the colleges in Bone regency, South Sulawesi province. In IAIN Bone, particularly at the English Study Program, there is Writing subject that taught from the fourth to seventh semester continuously. Writing is one of the main subjects, thus the students have to pass this course in order to finish the study. Currently, the lecturers teach Writing subject by using technique which is expected to be effective to make the students engaged and interested.

However, there are some problems faced by the students specially in Writing subject. According to her, the students are still lack of vocabulary, therefore they always find difficulties in choosing correct words in writing. They are also lack of idea to write or unable to express their idea into writing. In writing, they cannot organize the paragraph well. Overall, the students score in writing subject are still below 70 which is the standard score to pass the subject.

Moreover, the problems mentioned above are also admitted by the students. Based on the interview to 10 students of English Study Program in IAIN Bone, most of them find difficulties in finding ideas to be express in writing. Even though they have something to write, they cannot express the idea into a good paragraph. They feel it is difficult to organize the idea and choose the correct words to express the idea. The students also think that the technique used by the lecturer need to be changed or improved.

Those problems faced by the students in English language must be solved by English researcher or lecturer. Because by using an appropriate and an interesting technique in the process of teaching and learning Writing in the classroom it is expected that the learners will find it easier in learning. Therefore, the students will be engaged and interested to study. Moreover, those problems mentioned before can be solved.

The teaching technique is very important in increasing students' ability specially to write skill. English teacher should know what techniques that can help students to overcome their problems. A teacher must help the students to find out their ideas. One of the techniques that can be used to help the students to explore their ideas and transform those ideas into writing is mind mapping technique. In this case, the researcher will try to help student to find out their ideas by using mind mapping technique.

Mind mapping is one way to organize and present a concept, ideas and other information in hand drawn map. It presents the information which is

connected with the central topic in word key form, picture and colors. Buzan & Buzan (2002) state that mind maps are also brilliant route-map for the memory, allowing to organize facts and thoughts in such a way in the brain's natural way of working is engaged right from the start. When students use mind mapping in daily basic learning, they will find that their life becomes more productive, fulfilled, and successful on every subject. There are no limits to the number of thoughts, ideas and connections that brain can make, which means that there are no limits to the different ways can use Mind mapping to help.

Some benefits of using mind mapping technique are explained by Michalko (2011), mind mapping will help us in some cases, such as: (1) activates the whole brain, (2) Allows focus on the subject, (3) gives a clear picture of both the details and the big picture and (4) requires concentrating on the subject, which helps get the information about it transferred from short-term memory to long-term memory. Meanwhile, according to Buzan (2012), some advantages of using Mind Map are: (1) Plan, (2) Communicate, (3) Be more creative, (4) Save time, (5) Concentrate, (6) Remember better, (7) Study faster and more efficient and (7) See the 'whole picture'.

Those benefits of mind mapping technique match with the problems of the students mentioned before. By using mind mapping technique, in can open up students' creativity which will make them easier to find ideas to be expressed in writing. It also gives the students a complete picture of what they are going to write which results a better writing organization. Vocabulary will not be a problem anymore because it can make the students remember better and faster. Therefore, using mind mapping technique will be an effective and efficient way to overcome the problems mentioned before.

Some researchers have conducted the researches by using mind mapping technique which show that mind mapping technique is a right technique to overcome the students' problem is studying writing mentioned above. D'Antoni & Zipp (2006) in their journal Applications of the Mind Map Learning Technique in Chiropractic Education: A Pilot Study and Literature Review found that the mind map learning technique enabled the students to better organize/integrate material presented in the course. This finding proves that mind mapping technique can help the students to write their paragraph well.

Syamsuddin (2014) in his research on essay writing ability of the tenth-grade students of MAN 2 Model Makassar by using mind mapping strategy found that mind mapping strategy improved students' writing achievement. Some frequent exercises of the technique can improve students' English ability not only in writing, but also in other ability. Another research is by Putra, Riswanto, & Prandika (2012) in their study, The Use of Mind Mapping Strategy in the Teaching of Writing at SMAN 3 Bengkulu, concluded that Mind Mapping Strategy improved students' writing achievement. These findings show that mind mapping is a suitable technique which can be used by the lecturers to improve students' achievement in learning writing.

Wahyu

Students' Engagement and Interest in Learning Writing through Mind Mapping Technique

One more research is from Aulia (2011) in her research in using mind mapping to improve the fourth semester students' writing skills of example essays in the English department of FKIP UNISMA. She concluded that the use of the mind mapping strategy is effective and successful to improve the students' ability in writing skills, particularly in terms of gathering ideas for the target topic, and the implementation of mind mapping gets positive personal judgments from the students to facilitate them in learning writing.

Those studies mentioned above approve that mind mapping technique is an effective technique to undertake students' problems in learning writing. However, none of the studies above have studied about students' engagement, particularly students' participation in writing class, and students' interest in learning writing. Therefore, this study will focus not only on students' achievement, but also students' participation in writing class and students' interest in learning writing.

Based on the illustration above, the purpose of this investigation was to find out:

1. To discover whether or not the use of mind mapping technique in teaching Writing is effective in improving students' engagement in learning writing on the fourth semester of English Study Program of IAIN Bone.
2. To discover whether or not the use of mind mapping technique in teaching Writing is effective to raise the students' interest in learning Writing at the fourth semester of English Study Program of IAIN Bone.

Research Method

In this research, the researcher used the quantitative method with quasi-experimental design, where it consisted of two groups of students. The research was held in IAIN Bone. Population is all of the subjects who are connected to the research. The population of this research was all of the fourth-semester students of English Study Program in IAIN Bone. The sum of the populations was 73 students.

In collecting the required data to answer the research questions, the researcher used three kinds of instruments; they were writing test, observation, and questionnaire. Writing test and observation were used to answer the first research question, which was to find out students' engagement in learning writing through mind mapping technique showed by students writing achievement and participation. The questionnaire was given in order to answer the second research question, that was to find out students' interest in learning writing with mind mapping technique.

Both groups were given two kinds of test which were pretest and posttest. The pretest was aimed to find out the prior writing ability of the students, while

posttest was given to find out the students' ability in writing after conducting the treatment. One group received treatment by using Mind Mapping Technique and the other group received treatment by using Brainstorming Technique.

Meanwhile, in order to find out students' participation in learning writing through mind mapping technique, the observation was done with observation checklist in every meeting. The data obtained was analyzed quantitatively and the result were compared. At the end of the research, the questionnaire was distributed to all students in the experimental group to measure their interest in studying writing through mind mapping technique.

Findings and Discussion

Findings

The findings that the researcher reports in this chapter are based on the data analysis collected by using test and questionnaire about the students' engagement and interest in learning writing through mind mapping technique.

Students' Engagement

As previously stated, the researcher conducted this research to find out students' engagement in learning writing through mind mapping technique. To define students' engagement, the researcher used tests and observation. Tests were given to the students to measure students' writing achievement while the observation was done to describe students' participation in learning writing. Afterwards, the result of each dimension of engagement would be compared to find out which dimension had the highest increase.

Students' Achievement

In order to measure students' writing achievement, the researcher used test as the instrument of collecting data. In this research, there were two tests given to students, namely pretest and posttest which were given before and after doing treatment respectively for both groups, experimental and control group. Both groups were given similar tests and scored similarly as well. The difference of both groups was on the treatment given. The experimental group was given treatment by using mind mapping technique while the control group was treated without using mind mapping technique. Therefore, it could be seen the different posttest results of both groups which reflected which treatment was more effective than the other.

Before the treatment given for both groups, pretest was given in order to measure students' prior writing skill. Both groups showed similar pretest result which means that the writing skill of the students in experimental and control group were homogenous. The result can be seen on table 1 as follow:

Table 1. Frequency and Percentage of Students' Pretest of Experimental and

Wahyu

Students' Engagement and Interest in Learning Writing through Mind Mapping Technique

Classification	Range of score	Control Group			
		Experimental Group		Control Group	
		F	%	F	%
Excellent	85 – 100	0	0	0	0
Good	75 – 84	1	6.67	4	26.67
Fairly Good	60 – 74	6	40	5	33.33
Fair	45 – 59	7	46.66	5	33.33
Poor	0 – 44	1	6.67	1	6.67
Total		15	100	15	100

Table 1 shows that before giving the treatments most of the students' Pretest results in experimental group were in fairly good and fair classification. It shows that 7 students or 46.66% of 15 students get fair classification, 6 or 40% students were in fairly good classification. There was a student who got poor classification.

In control group, table 1 shows that students were vary in good, fairly good and fair classifications where 4 students or 26.67% of 15 were in good classification, 5 students or 33.33% were classified as fairly good as well as fair classifications. There was one student in poor classification which was similar to experimental group. It was found the same like in the experimental group that there are no students in excellent classification.

After calculating the result of the students' Pretest, the mean score and standard deviation are presented in the following table.

Table 2. The Mean Score and Standard Deviation of the Students' Pretest of Experimental and Control Group

Item	Experimental Group	Control Group
Mean Score	58.33	60.47
Standard Deviation	7.734	10.616

The classification of translation test above shows the mean score of experimental groups, the category is identified in fairly good classification since the mean score was 58.33 with the standard deviation is 7.734. The control group was also considered in fairly good classification with the mean score is 60.47 and standard deviation is 10.616. This is corresponding with the statement by the lecturer who taught writing subject to the fourth semester students of English Study Program in IAIN Bone mentioned previously in the background. According to the lecturer, the students' score in writing subject were still below 70 which is the standard score to pass the subject.

Both of experimental and control group are not significantly different. The skill of both groups was almost similar. Even though there was a different value

between the experimental and the control group, the experimental group had lower score than control group but both of them were still categorized as fairly from five levels of classification.

In order to know whether the difference between pretest result of both groups, the researcher analyzed the students' scores of both experimental and control group to find out the T-test value. The result is delivered on table 3 as follows:

Table 3. The T-test of The Students' Pretest of Experimental and Control Group

Variable	Alpha (α)	Probability Value
Pretest of Experimental and Control Group	0.05	0.534

Based on the statistics test of Pretest in probability value (significant 2-tailed), probability value is much higher than alpha ($0.534 > 0.05$). It means that there is no a statistically significant difference between the average scores of the students of experimental and control group in Pretest. In other words, the students' writing skill of both groups before conducting the treatments are almost the same. Because of that condition, the treatment was then conducted to both groups. The experimental group was taught by using mind mapping technique while control group without using mind mapping technique.

Table 4. Frequency and Percentage of Students' Posttest of Experimental and Control Group

Classification	Range of score	Experimental Group		Control Group	
		F	%	F	%
Excellent	85 – 100	12	80	7	46.67
Good	75 – 84	3	20	6	40
Fairly Good	60 – 74	0	0	2	13.33
Fair	45 – 59	0	0	0	0
Poor	0 – 44	0	0	0	0
Total		15	100	15	100

Table 4 shows that after giving the treatments most of the students' posttest results in experimental group were in Excellent classification and the rest were in good classification. It shows that 12 students or 80% of 15 students get excellent classification and 3 or 20% students were in good classification. There was no student who got fairly good, fair or poor classification.

In control group, table 4 shows that students were vary in excellent, good

Wahyu

Students' Engagement and Interest in Learning Writing through Mind Mapping Technique

and fairly good classifications where 7 students or 46.67% of 15 were in excellent classification, 6 students or 40% were classified as fairly good and only one student (13.33%) got fair classifications. There was no student who got poor score.

The result of the post-test employed to the experimental and control group is defined to be the way to know the mean score and standard deviation. The following table presented the mean score and the standard deviation of both groups.

Table 5. The Mean Score and Standard Deviation of the Students' Posttest of Experimental and Control Group

Item Group	Experimental Group	Control
Mean Score	86.87	78.73
Standard Deviation	9.288	11.222

The classification of translation test above shows the mean score of experimental group, the category was identified in excellent classification since the mean score was 86.87 with the standard deviation is 9.288. The control group was considered in good classification with the mean score was 78.73 and standard deviation is 11.222. This means the problem mentioned before that most of the students' score in writing subject were still below the passing standard 70 had been solved. It is proven by the posttest result of the students in both groups reached up to 86.87 and 78.73 which is higher than the standard 70 score.

Both of experimental and control group were significantly different. It can be seen from the table 5 above, the difference between the achievement of students in experimental group and control group represented by their mean score. There was a different value between the experimental and the control group, the experimental group got higher score compared with the control group.

In order to know whether the difference between pretest result of both groups, the researcher analyzed the students' scores of both experimental and control group to find out the T-test value. The result is delivered on table 6 as follows:

Table 6. The T-test of The Students' Posttest of Experimental and Control Group

Variable	Alpha (α)	Probability Value
Posttest of Experimental and Control Group	0.05	0.039

Table 6 shows the statistical hypothesis based on statistics test in probability value (significant 2-tailed). The probability value is lower than alpha ($0.047 < 0.05$). It means that H_1 is applicable and H_0 is not applicable. It can be known that after giving the treatments to the both groups, where the experimental group is taught by using mind mapping technique and control group without using mind mapping technique, the students' writing achievement of both groups is significantly different. It indicates that teaching writing through mind mapping technique is more effective than teaching without using mind mapping technique.

a. Students' Participation

As being mentioned previously that in this research, there were two of three dimensions of engagement that were measured and analyzed namely students' achievement and students' participation. This section explains students' participation in learning writing through mind mapping technique. In order to find out whether the students participated enough or not, the researcher did observation while the treatments were conducted. While doing the observation, the researcher filled the observation sheet of students' participation in learning writing.

The result of the researcher's observation on students' participation in learning writing through mind mapping technique can be seen as follows:

Table 7. Percentage of Students' Participation in Each Meeting

No	Students' Name	M 1	M 2	M 3	M 4	M 5
1	HN	1	1	2	3	3
2	YA	2	2	3	3	3
3	AI	1	1	2	2	2
4	MH	1	2	2	3	3
5	NL	0	1	1	3	3
6	LL	1	2	3	3	3
7	IW	1	1	1	2	2
8	RQ	0	2	3	3	3
9	NR	0	1	2	3	3
10	SA	2	2	3	3	3
11	RW	1	1	2	3	3
12	NH	1	2	2	3	3

Wahyu

Students' Engagement and Interest in Learning Writing through Mind Mapping Technique

13	AZ	0	1	1	2	2
14	NL	1	2	3	2	3
15	MA	1	1	2	3	3
Total		13	22	32	41	42
Percentage		28.9	48.9	71.1	91.1	93.3

Table 7 shows the percentage of students' participation in learning writing through mind mapping technique in every meeting. The total point was got by calculating all of students' point in every meeting. The lowest possible point for every meeting was 0 which means no students did any of the three indicators. Meanwhile, 45 was the highest possible score for every meeting that can be got if all students did all indicators in a meeting. After that, the percentage of students' point in every meeting was classified whether it was low or high.

It can be seen clearly from the table 4 that on the first meeting (M 1), the students only got 13 points or 28.9%. Among the five meeting of observation, the M 1 shows the lowest percentage. It means that students' participation is very low. On M2 and M3, the students got 48.9% and 71.1% respectively which means there was an improvement upon students' participation from the first meeting to the second meeting as well as from the second meeting to the third meeting. However, the percentage of students' participation on both second and third meeting were still below 75%. Therefore, both were still categorized as low.

On the meeting 4 and 5 (M4 and M5), the students' participation percentage reached 91.1 and 93.3 respectively. Both were categorized as high as both were higher than the standard 75%. It means that the students' participation in learning writing through mind mapping technique in the fourth and fifth meeting were high.

Students' Interest

The questionnaire was distributed to the students to know their interest in learning writing through mind mapping technique. The data shows that the use of mind mapping technique in teaching writing could enhance students' interest of the fourth semester of IAIN Bone. This is indicated by the students' scores of the questionnaire as shown in the following table:

Table 8. The Percentage of Students' Interest

Interval Score	Category	Authentic Materials	
		F	%
84-100	Very high	13	87
68-83	High	2	13
52-67	Moderat	0	0

		e	
36-51	Low	0	0
20-35	Very low	0	0
Total		15	100

The data of the students' interval score based on the questionnaire to measure the students' interest in table 4 shows that 13 students or 87% had a very high interest in learning writing through mind mapping technique. The rest 2 students or 13% of the students were highly interested to learn writing through mind mapping technique.

Discussion

The points to be discussed in this section are the students' engagement and interest. In this research, the students' engagement was measured in two dimensions, achievement and participation. The discussion of the obtained data can be seen as follows:

Students' Engagement

As previously mentioned, there are two dimensions of engagement which were investigated in this research, namely students' achievement and participation. Regarding to the writing achievement of the students, the score of the students pretest and posttest of both experimental and control group can be as the reference. The result of the pretest of experimental group was similar with the result of the pretest in control group. Based on statistics calculation, the mean score of both groups were 58.33 for experimental group and 60.47 for control group. It means that control group had a quite higher score than the experimental group. However, the difference was not considerable. Moreover, based on SPSS 23 calculation, in this case independent sample t-test of pretest result of both experimental and control group, the value was 0.534 which is bigger than alpha 0.05. It means that there was no significant difference between the pretest result of experimental and control group. Therefore, the research was proceeded on both groups.

After conducting five meetings of the treatment stage, the posttest was given to both experimental and control group in order to know the students' achievement after the treatment stage. The mean scores were 86.87 in experimental group while the control group got 78.73 average score. A considerable difference can be seen on both mean scores. This time, the students in experimental group which were taught through mind mapping technique got higher score than the students who were not taught through mind mapping technique in control group. In order to know whether the difference was significant or not, the researcher calculated the score statistically by using SPSS 23. The result of independent sample t-test by using SPSS 23 showed

Wahyu

Students' Engagement and Interest in Learning Writing through Mind Mapping Technique

that the value was $0.039 < 0.05$ (alpha). The result means that there is a significant difference of the posttest result of both groups. There was a significant improvement of students' score in experimental group which were taught writing through mind mapping technique compared with the students in control group which were not taught through mind mapping technique. Thus, mind mapping technique is effective in improving student' writing achievement. This finding is in line with the research finding by Syamsuddin (2014) in his research on essay writing ability of the tenth-grade students of MAN 2 Model Makassar by using mind mapping strategy found that mind mapping strategy improved students' writing achievement as well as the research by Putra, Riswanto, & Prandika (2012) in their study The Use of Mind Mapping Strategy in the Teaching of Writing at SMAN 3 Bengkulu which found that Mind Mapping Strategy improved students' writing achievement.

Regarding to the students' participation in the class during the treatment session in experimental group which was taught through mind mapping technique. Based on the result of the observation sheet, it was found that the students' participation increased in every meeting. In the first and the second meeting, the percentage of students' participation were 28.9 and 48.9 respectively which were very low. It was then increased significantly on the third meeting with 71.1. However, it was still below the standard which was 75. Later, on the fourth and fifth meetings, the percentage of students' participation increased to 91.1 and 93.3 which both were categorized as high. Therefore, it can be concluded that treatment with mind mapping technique increased students' participation in learning writing.

From the explanation above, mind mapping technique is effective to be applied to increase both elements of engagement namely achievement and participation. Mind mapping technique is proven to be effective to improve students' engagement in learning writing. Therefore, H_1 of the hypothesis was accepted and H_0 was rejected.

Afterwards, based on the results both dimensions of engagement namely cognitive engagement showed by students' achievement in learning writing through mind mapping technique and behavioral engagement presented by students' participation in learning writing through mind mapping technique, it can be seen that there is a difference between both results. The students' achievement which was showed by the experimental group average posttest score was 86.87. Meanwhile, students' participation during the last observation on the last treatment in the experimental group reached 93.3. It can be clearly seen that students' interest in learning writing through mind mapping technique was higher than students' achievement in learning writing through mind mapping technique. In the other words, students' behavioral engagement

increased more than students' cognitive engagement in learning writing due to the technique used.

Therefore, it can be concluded that mind mapping technique increased more highly students' behavioral engagement than students' cognitive engagement in learning writing. It means that mind mapping technique is more effective on students' behavioral engagement than on students' cognitive engagement.

Students' Interest

Based on the result of the questionnaires employed to the experimental group, the interest of the students of the fourth semester of IAIN Bone was categorized as very high and high. There were 13 of 15 students (87%) were categorized as very high and the rest 2 students (13%) were categorized as high. Therefore, it can be said that all of the students in the experimental group which were taught through mind mapping technique were very highly or highly interested in learning writing through mind mapping technique.

Furthermore, the analysis upon all items of the questionnaire shows that mind mapping technique successfully solved the problems in learning writing mentioned by the lecturer and the students in the interview before the research was conducted. Based on students' response, mind mapping technique helped them to find ideas to write and made them easy to transfer the ideas into a well-organized writing. It is also proven according to students' response to be able to help improving students' vocabulary mastery as well as help them to be more active in learning writing. Eventually, the students' interest in learning writing increased because of mind mapping technique. Therefore, mind mapping technique is an effective and efficient way in learning writing and should be applied by the lecturer.

From this fact, it points out that the technique used by lecturer in teaching writing is closely related to the students' interest or response toward the subject. The use of mind mapping technique in teaching writing is proven to be effective to increase the students' interest in learning writing subject.

According to Wigfield & Wentzel (2007), there are four types of interest namely expressed interest, manifest interest, tested interest and inventoried interest. The analysis of each types of interest based on the questionnaire result shows that that all types were classified as very high. However, the expressed interest shows the highest score which was 71.4 (95%). It means that the students had a very high expressed interest in learning writing through mind mapping technique. Meanwhile, the manifest interest got the lowest with 66.2 (88%) but it was still categorized as very high. It can be concluded that among the four types of interest, the expressed interest got the highest score.

Wahyu

Students' Engagement and Interest in Learning Writing through Mind Mapping Technique

Therefore, the students had highest in expressed interest in learning writing through mind mapping technique.

Conclusion

Mind mapping technique use is effective in improving students' achievement as well as students' interest in learning writing. Therefore, the use of mind mapping technique is effective in improving students' engagement in learning writing. Between the two dimensions of engagement, mind mapping technique gave a more effect on the students' behavioral engagement than it did on the students' cognitive engagement.

The use of mind mapping technique is effective to raise students' interest in learning writing. Among the four types of interest, mind mapping technique increased the students' expressed interest higher than it did on the manifest interest, tested interest and inventoried interest. This research was fulfilled with contribution from many parties, including the institution where the researcher conducted the research, IAIN Bone. Appreciation is also given to the lecturers and students of English Program of IAIN Bone who had given a big help during the research.

References

- Aulia, V. (2011). Using Mind Mapping to Improve the Fourth Semester Students' Writing Skills of Example Essays in the English Department of FKIP Unisma.(Thesis). *Disertasi dan Tesis Program Pascasarjana UM*.
- Buzan, T., & Buzan, B. (2002). *How to mind map*. Thorsons London.
- D'Antoni, A. V, & Zipp, G. P. (2006). Applications of the mind map learning technique in chiropractic education: A pilot study and literature review. *Journal of Chiropractic Humanities*, 13, 2–11.
- Kirkpatrick, L. C., & Klein, P. D. (2009). Planning text structure as a way to improve students' writing from sources in the compare–contrast genre. *Learning and Instruction*, 19(4), 309–321.
- Michalko, M. (2011). *Cracking creativity: The secrets of creative genius*. Ten Speed Press.
- Putra, Riswanto, & Prandika, P. (2012). The Use Of Mind Mapping Strategy in the Teaching of Writing at SMAN 3 Bengkulu. *International Journal Of Humanities And Social Science Vol. 2 No. 21; November 2012*.
- Syamsuddin. (2014). The Effectiveness of Mind Mapping Strategy on Essay Writing Ability of the Tenth Grade Students of MAN 2 Model Makassar. (*Graduate Program*), *State University of Makassar, Unpublished*.
- Wigfield, A., & Wentzel, K. R. (2007). Introduction to motivation at school: Interventions that work. *Educational Psychologist*, 42(4), 191–196.

