

ENGLISH TEACHING IN THE LENS OF MIND MAPPING: EXAMINING ITS EFFECTIVENESS IN IMPROVING STUDENTS' READING SKILLS

Nihta V. F. Liando, Eliska L. Dolongtelide, Mister G. Maru

English Education Department, Faculty of Languages and Arts, Universitas Negeri Manado

Correspondence author: Nihtaliando@unima.ac.id

Received: 12 October 2022

Accepted: 09 November 2022

Published: 22 November 2022

Abstract: The aim of this research is to reveal the effectiveness of using mind map technique in teaching English to improve students' reading skills at one vocational high school in North Sulawesi. Experimental study is applied to the controlled and experimental classes. The students in the controlled class were taught using traditional method and in the experimental class by Mind Map Technique. The result of this study shows the mean scores of the test in the experimental class were 81, while the mean scores of the test in control class were 53.3. The finding shows there is an influence of using mind map technique on student reading ability. The students show responsibility and enjoy the learning process. It could be argued that Mind-Map technique can be used as one of the alternatives in teaching reading. Thus, it can be concluded that Mind Map technique is considered effective in teaching reading to students at this school. It helps them to learn the reading content as well as teaches them how to understand the content of English texts. With mind map technique, it was found that the students easily understand the texts. They could also retell the text and were able to answer the questions. Mind Map technique could improve the students' achievement in reading comprehension text. Teaching reading by using Mind Map technique is effective rather than traditional method.

Keywords: *EFL, Mind Map, Reading Skills, Teaching.*

INTRODUCTION

Nowadays, English Language is used by the most people around the world, for some countries, English Language is used as a foreign language, especially in Indonesia (Liando, Tatipang & Lengkoan, 2022). In order to communicate with each other, the Indonesian government applies English Language in learning curriculum at schools. Mogeia, (2019) stated that "as the Indonesian nation, in an effort to educate the nation's life and shape the character and civilization of a dignified nation, quality education is needed." Hopefully, that the people can speak English well and correctly. In some schools, the textbooks contained of some information that related to those subjects the learners learn only written in English. To understand the text, they should be master in reading skill that they should comprehend.

As mentioned by Liando et al., (2022) states that "there have been a number of studies exploring motivation and attitude of high school students and second language learning. Key findings of these studies suggest factors such as language

aptitude and attitude toward the target language community have proved to be important in being successful in learning the target language.”

The learning process at this vocational high school is not as the same as the other schools. The students learning at the classroom for a week, and for the next week they should do the practice in the agricultural land. So they only learning English once a week or twice for a month. They faced some reading problems which caused them have difficulties in comprehending the information presented in the textbooks (Piong & Robiasih, 2020). Therefore, through this work, writer tries to discover more about teaching English by using mind map technique to improve students' reading skills. Reading is the activity of somebody who reads. Reading is the particular way in which you understand the book, situation, etc”. Reading is an important action not only to the individual, but it also posses to a great social significance (Liu & Yuizonono, 2020). Reading comprehension is an action to understand something by looking on a written text. In school, reading is one of the most important subjects. The teacher should apply practicing in reading skills in making students to be master in English Language.

One of the focuses in this problem is comprehension skills reading (Reading). Comprehension is one important aspect in reading activities, because in essence understanding a reading material can improve skills reading itself or for a specific purpose to be achieved. According to Novianti et al., (2020) reading comprehension (reading for understanding) is a type of reading to understand literary standards or norms, critical reviews, written drama, and patterns of fiction in business to gain an understanding of the text, readers use certain strategies. In the process of learning to read text, students are faced with difficulties in understanding a text. Students cannot escape from the need to read books in English in order to improve and develop knowledge accordingly with their respective study programs. According to (Murray & Christison, 2019) argue that reading is essentially a complicated thing that involves many things, not just reciting the text, but also involving visual activity, thinking, psycholinguistics, and metacognitive.

However, Mahmoud & Mohaidat, (2018) mentioned that in practice in the learning process teach English Reading Text students are faced with various difficulties in understanding Reading Text, from the difficulties has an impact on understanding text that is difficult to achieve meaning actually from a reading. Therefore we need an interesting media/technique or method to make students focus on reading while at the same time understanding what they read. Tatipang et al., (2021) claimed that Using mind mapping is a suitable way to make learning to read more interesting. However, in its application there are several obstacles that are quite important to consider, such as the mind map model, the teacher's creative way to package material in the mind map, timing in learning, the initial approach as the basis for the teacher in attracting students and also how the teacher teaches using this mind map. Therefore, this study aims to examine further the effectiveness of mind mapping on students' reading skills. Moreover, there are many aspects of learning process that can be used to analyze, but the researchers limited the study on revealing the effectiveness of using mind map technique reveal in teaching English especially reading skills based on the syllabus and the order of Core Competencies

(known as KI) and Basic Competencies (known as KD), how to comprehend the written text through mind map technique.

REVIEW OF LITERATURE

Reading is a process performed and used by readers to get the message to be conveyed by the author through the medium of words / written language. Reading is a process demands that the word group that is a unit will be seen at a glance. If the meaning of the words is not fulfilled, then explicit and implied message will not be caught and process reading is not accomplished with good (Teo et al., 2016). It is stated in Aytaç & Kaygisiz, (2021) that there are two types of classrooms reading performance. First is oral reading. In the process of teaching and learning teaching in the classroom, the teacher may ask the students to read orally. There are some advantages in the oral reading done at beginning and intermediate levels. The advantages of the oral reading are as an evaluative check on bottom-up processing skills, a pronunciation check, and an extra activity for students to help the teacher to highlight a certain short segment of a reading passage. At advanced levels, the teacher also can apply this type to reach those three advantages above.

The teachers have to train students in all aspect of reading in order to improve students reading sklills. As stated in (Mahmoud & Mohaidat, 2018) “reading instruction must be given a definite place in the curriculum if adequate abilities in this subject are to result. Definite responsibility for effective reading instruction must be delegated to teachers. Reading is an all-school function, but skill in the subject must be developed by specially trained teachers. Good reading will not result from a haphazardly planned program of instruction. Provision for reading during each school day, however, makes possible definite training in all aspects of reading. The various skills and abilities may be developed and checked, and remedial techniques may be applied is needed.”

As (Liu & Yuizono, 2020) claimed that mind mapping is a visual technique for structuring and organizing thought and idea”. Schroeder et al., (2017) argue that mind map also conclude as an intricate diagram that mirrors the structure of a brain cell with branches reading out from its center, evolving through patterns of association. It is an efficient and profoundly inspiring way to feed starving minds, intellects, and spirits. Moreover, Morfidi et al., (2017) mentioned that mind map is a revolutionary thinking tool that, when mastered, will transform your life. It will help you process information, come up with new ideas, strengthen your memory, get the most out of your leisure time and improve the way you took.

The teachers need to do some steps in order to create a Mind Map such as central topic, sub topic, branches and sub-branches. As mentioned in Tatipang et al., (2021) how to construct a mind map as follow:

- 1) Central Topic

This is the main theme of the mind map, which is usually broad (e.g., attacking, defending, passing). The central position of the main theme enables the fluid flow of information to produce the mind map.

- 2) Sub Topic

This is the main of the mind map, which are directly related to the central topic (e.g., attacking in wide areas, defending with a deep block, or long passing). There

are also referred to as the basic ordering ideas (BOI) to guide the concepts in the branches and sub-branches.

3) Branches

A variety of more specific areas extend from the sub-topics. These are the main concepts with the sub-topic and reveal an additional level of information.

4) Sub-branches

Additional branches are added to further enhance the information within the sub-topic to extend a greater depth of detail. It is important to note that there is no limit to the number of sub-branches you can create

One of the way to construct mind mapping also stated in (Teo et al., 2016), were they suggest that several recommendations when making mind map. These are the recommendations.

- 1) Place an image or topic in the centre using at least 3 colours
- 2) Use images, symbols, codes, and dimensions throughout your Mind Map.
- 3) Select key words and print using upper or lower case letters.
- 4) Each word/image is alone and sitting on its own line.
- 5) Connect the lines starting from the central image. The central lines are thicker, organic and flowing, becoming thinner as they radiate out from the centre.
- 6) Make the lines the same length as the word/image.
- 7) Use colours – your own code – throughout the Mind Map.
- 8) Develop your own personal style of Mind Mapping.
- 9) Use emphasis and show associations in your Mind Map.
- 10) Keep the Mind Map clear by using radial hierarchy, numerical order or outlines to embrace your branches.

In order to use the mind map technique, the students find it easier to understand what they read. According to Andoko et al., (2020) the mind mapping technique is beneficial for several purposes, including:

- 1) Summarizing information
- 2) Brainstorming (independently or as a group)
- 3) Quick note taking
- 4) Content creation
- 5) Formation of ideas or concepts
- 6) Problem solving
- 7) Rapid thought recording
- 8) Planning
- 9) Introspection and self-awareness.

Review of the study is needed in order to make a replication. This research is intended to improve student's reading skills by using mind map technique. Another researcher has been conducted before, to find the benefit of using mind map technique to improve student's reading skills.

RESEARCH METHOD

In conducting this research, experimental study with controlled and experimental classes were applied. The students in the controlled class were taught using traditional method and in the experimental class, students were taught by using Mind Map Technique. In this study, the researchers focus on improving

learners' reading skill in comprehend the written text through the mind map technique to recognize the communicative functions of written texts, according to form and purpose.

The research population is the students at the Eleventh Grade Test was used to obtain the data. The total number of population are 68 students. The sample in this research was taken randomly from the population of Eleventh Grade students in academic year 2018-2019. There were 60 students. The students were classified in two groups; one as controlled group, the other as experimental group. The controlled group were taught using traditional method and the experimental group were taught by using Mind Mapping Technique. Each group consists of 30 students. The procedure of the experiment was as follows: 1. The students read silently their reading passages for 15 minutes. 2. The students find out the keywords and make a Mind Map of the passage they've read. 3. The students have to coloring the diagram of Mind Map. a). The students do their test Arranging the Material and Presented the Method in the Class (The material was taken from student's handbook about reading, The writer used Forward an English by Erlangga and Talk Active 2B by Yudistira). b). Arranging and conducting the test (The test was carried out to check the significant difference between the two groups after the treatment given to the experimental). The number of item test was 10 multiple choices. Analyzing the Data and Testing the Hypothesis. At the end of the class, the writer analyzes the data. The formula is used in analyzed the data is test.

$$s^2 = \frac{\sum (x - \bar{x})^2}{n - 1}$$

The instrument of this research is test of reading test which consisting of 20 questions. They are multiple choice tests consist of 20 items from number 1 to 20. The scores per item is 5, that means if the students can answer all questions correctly, they will get 100. Xu et al., (2017) stated that data are facts or information used in deciding or discussing something. The researcher collected the data to support this research in deciding some actions so that the students' reading skills could improve. The writer doing the test after 3 meetings in teaching reading of two classes by using mind mapping technique and another by using traditional method. The tests which consist of 20 items are used to measure the students' capability in reading comprehension skill. The writer used t- test for two connected sample. According to Mishra et al., (2019) "t-tests is simply comparing two means to see if they are significantly different from each other.

In this research, the writer tried to analyzing the two most commonly conducted t-test, the paired or dependent samples t-test and the independent t-test. The writer also tried o find out the standard deviation, as Mishra et al., (2019) mentioned that: "The probabilities that are based on the normal distribution are accurate when (a) the population standard deviation is known, and/or (b) we have a large sample (i.e, n > 120)".

The writer processes and analyze the data through the following steps:

- a. Investigated the students' work sheets, giving a score and described the scores into some tables.
- b. Determining mean of variable X with the formula:

$$\bar{X} = \frac{\sum X}{n}$$

c. Determining mean of variable Y with the formula:

$$\bar{X} = \frac{\sum X}{n}$$

d. Determining the standard deviation sample of variable X with the formula:

$$SD = \sqrt{\frac{\sum(x-\bar{x})^2}{n}}$$

e. Determining the standard deviation sample of variable Y with the formula:

$$SD = \sqrt{\frac{\sum(x-\bar{x})^2}{n}}$$

f. Determining the variance sample of variable X with the formula:

$$s^2 = \frac{\sum(x-\bar{x})^2}{n-1}$$

g. Determining the variance sample of variable Y with the formula:

$$s^2 = \frac{\sum(x-\bar{x})^2}{n-1}$$

- SD = standard deviation
 X = Mean
 $\sum X$ = sum of all data value
 n = number of data items in sample
 s^2 = variance sample
 X = each score in the distribution

FINDING AND DISCUSSION

When doing the observation in this school, the researcher tried to teach English use Mind Map technique in experimental class by using the written text on Erlangga text book. In this research, the researcher took populations in the whole students of XI TPH 1 and XI TPH 2 are 68 students. For the research, 30 students from each class (XI TPH 1 and XI TPH 2) were taken as the sample, and total number of sample was 60 students.

The writer did the test for the students by used the 10 numbers of multiple choice in Talk Active 2B book by Yudistira. Before they answer the question, the writer asked the students to find out the keywords and make a diagram of the written text through Mind Map as like as the figures bellow:

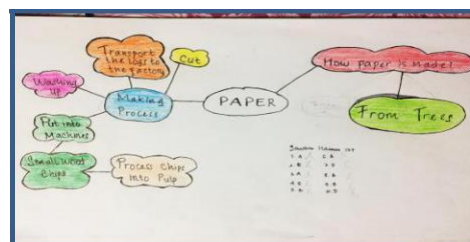


Figure 1. The diagram of Mind Mapping by the students

The Data of Teaching Reading by Using Mind Mapping Technique (X Variable)

The writer collected the data from the students at XI TPH 2 as the experimental class that have been taught by using Mind Mapping Technique with the result that shown by table 1.

Table 1. The Data of the Students at Experiment Class

No.	NAME	SCORES
1	Student 1	85
2	Student 2	70
3	Student 3	80
4	Student 4	90
5	Student 5	65
6	Student 6	75
7	Student 7	70
8	Student 8	80
9	Student 9	90
10	Student 10	80
11	Student 11	90
12	Student 12	85
13	Student 13	85
14	Student 14	80
15	Student 15	95
16	Student 16	80
17	Student 17	75
18	Student 18	70
19	Student 19	95
20	Student 20	75
21	Student 21	70
22	Student 22	80
23	Student 23	85
24	Student 24	60
25	Student 25	90
26	Student 26	75
27	Student 27	90
28	Student 28	85
29	Student 29	90
30	Student 30	90
	TOTAL	$\sum X = 2.430$
	MEAN	$X = 81$

The Description of Data

To find the result of test the writer make table of the students score to each group. The result of experiment group is tabulated and calculated in the following table. After getting the data, researcher used the achievement test in the process of collecting the data. The writer gave test to experiment group. Table 1 shows that the total score of experimental class is 2430 and the mean is 81. The highest score result of experimental group is 95 there are two students, namely number 15 and 19. The lowest score of experimental class is 60 there is one student, namely number 24.

The Table of Frequency Distribution Data

The description of frequency distribution data of teaching reading by using Mind Map. The score in experimental class:

Table 2. Frequency of Score in Experimental Class

I	F	XI	<i>fi.xi</i>	$X_i - X$	$F_i (x_i - X)^2$
60-65	2	62,5	125	-19	722
66-71	4	68,5	274	-13	676
72-77	4	74,5	298	-7	196
78-83	6	80,5	483	-1	6
84-89	5	86,5	432,5	5	125
90-95	9	92,5	832,5	11	1089
Σ	30		2445		2814

Table 2 shows that students who scored 60 - 65 are 2 students with percentages 6.6%, students who scored 66-71 are 4 students with percentages 13.33%, students who scored 72 - 77 are 4 students with percentages 13.33%, students who scored 78 - 83 are 6 students with percentages 20%, students who scored 84 - 89 are 5 students with percentages 16.66% and students who scored 90 - 95 are 9 students with percentages 30%.

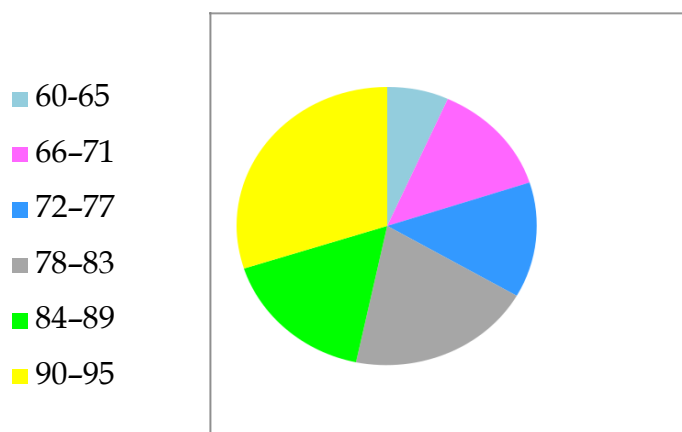


Figure 2. Histogram of Test Data in Experimental Class

The Data of Teaching Reading by Using Traditional Method (Y. Variable)

The writer collected the data from the students at XI TPH 1 as the controlled class that have been taught by using Traditional Method with the result that shown by table 3.

Table 3. Data of The Students Reading Test in Control Class

No.	NAME	SCORE
1.	Student 1	35
2.	Student 2	50
3.	Student 3	35
4.	Student 4	75
5.	Student 5	45
6.	Student 6	60
7.	Student 7	65
8.	Student 8	20
9.	Student 9	85
10.	Student 10	40
11.	Student 11	35
12.	Student 12	45
13.	Student 13	55
14.	Student 14	60
15.	Student 15	35
16.	Student 16	40
17.	Student 17	45
18.	Student 18	70
19.	Student 19	75
20.	Student 20	65
21.	Student 21	40
22.	Student 22	45
23.	Student 23	50
24.	Student 24	35
25.	Student 25	55
26.	Student 26	60
27.	Student 27	70
28.	Student 28	70
29.	Student 29	65
30.	Student 30	75
	TOTAL	$\sum Y = 1600$
	MEAN	$Y = 53.3$

In this research the total score of control group for the students' scores by using traditional method is 1600, and mean of control is 53.3. Table 3 show that the highest score result of control is 85 there is one student namely number 9. The lowest score of control class is 20 there is one student namely number 8.

The Description of Frequency Distribution Data

Description of frequency distribution data of teaching reading by using traditional method:

The score in control class

1. Calculating Range data with the formula:

$$\begin{aligned} R (\text{range}) &= H (\text{highest score}) - L (\text{lowest score}) \\ &= 85 - 20 \end{aligned}$$

$$= 65$$

2. Calculating Classes (K) with the formula:

$$\begin{aligned} K &= 1 + 3,3 \log n \\ &= 1 + 3,3 \log 30 \\ &= 1 + 3,3 (1,45) \\ &= 5,87 \\ &= 6 \end{aligned}$$

3. Calculating interval classes (I) with the formula:

$$\begin{aligned} I &= \frac{R}{K} \\ &= \frac{60}{6} \\ &= 10 \end{aligned}$$

Table 4. The Interval Data Score at the Controlled Class

INTERVAL	F
20 - 29	1
30 - 39	5
40 - 49	7
50 - 59	4
60 - 69	6
70 - 79	6
80 - 89	1
Σ	30

Table 4 shows that student who scored 20 - 29 is 1 student with percentages 3.3%, the students who scored 30 - 39 are 5 students with percentages 16.6%, the students who scored 40 - 49 are 7 students with percentages 23.3%, the students who scored 50 -59 are 4 students with percentages 13.3%, the students who scored 60 - 69 are 6 students with percentages 20%, the students who scored 70 - 79 are 6 students with percentages 20%, the student who scored 80 - 89 is 1 students with percentages 3.3%.

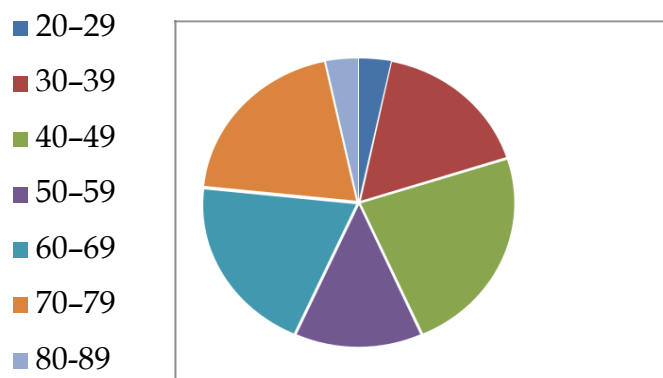


Figure 3. Histogram of Test Data in Control Class

The Analysis of Data

To arrange the result of the test, the tables were made to display students score for each class, experiment and control classes. According to table 1 and table 3 are have been calculated the results of:

- a. $\sum X = 2430$ ($2.440/30=81$)
- b. $\sum Y = 1600$ ($1.600/30=53.3$)
- c. **Standard Deviation Variable X and Y**

$$SD = \sqrt{\frac{\sum(x-\bar{x})^2}{n}}$$

$$\begin{aligned} SD &= 2370 / 29 \\ &= 81,72 \\ &= \mathbf{9.04} \end{aligned}$$

$$\begin{aligned} SD &= 7416.7 / 29 \\ &= 255.74 \\ &= \mathbf{15.9} \end{aligned}$$

- d. **Variance Variable X and Y:** $s^2 = \frac{\sum(x-\bar{x})^2}{n-1}$

$$\begin{aligned} &= \frac{\sum(x-\bar{x})^2}{(n-1)} \\ S^2 &= 2370 / 29 \\ &= \mathbf{81.72} \end{aligned}$$

$$\begin{aligned} S^2 &= \frac{\sum(y-\bar{y})^2}{(n-1)} \\ &= 7416.7 / 29 \\ &= \mathbf{255.74} \end{aligned}$$

- e. **Degree of Freedom**

$$df = (N1+N2 - 2) = (30 + 30 - 2) = \mathbf{58}$$

Discussion

Based on the data collection from the test gained from the experimental class taught by using Mind Mapping technique and control class by using traditional method showed the mean scores of test in experimental class were 81, while the mean scores of the test in control class were 53.3.

Based on the data analysis and discussion above, it means there is an influence of using mind map technique on student reading ability. So the students have responsibility and enjoy the learning process. It means that Mind-Map technique can be used as one of the alternative in teaching reading.

Along of the process of the research and the observation directly to the school that has been object of the research activity, the writer also gets some findings from the students, the teacher and the school. There are some students who have low motivation in teaching and learning English process. While the teacher, the method she did in teaching English is too monotone and it caused the students get bored.

There are also some information from the school itself such as the limitation of facility needed to teach English like Language Laboratory, a complete library and the curriculum also, learning English only once a week. Based on finding and discussion, this research shown that there is a significant different score for the experimental class that being taught by using mind mapping technique and for the controlled class that being taught by using traditional method. The research concluded that mind mapping technique is being effective in improving students' reading skills at this school.

CONCLUSION

Mind-Mapping technique helps students to learn the reading content as well as teaches them how to understanding the English content especially reading text. By using mind-mapping technique the students are easily to understand the texts, to retell and to answer the questions. It can be concluded that using discussion technique motivated the student's achievement on reading comprehension test. Teaching reading by using Mind-Map technique is effective rather than traditional method. The result indicates that the average score of experimental group (M) Mean is 81. It is higher than the control group mean which 53.0. The reading skill becomes very important in education. Students need to practice in order to have a good reading skill. Student will get more information by reading if they are able to read effectively. Based on the data analysis, there is an influence of mind-map technique on students reading ability. The students have responsibility and enjoy the learning process. The teacher have to teach the students how to competence a reading text.

Based on the findings above, the writer wants to give the solution of those findings that have been problems in teaching English by giving these following suggestions that are addressed to, First, For the students: a). The students should be the active participants in learning English by asking some problems of their reading skill. b). The students also should be diligent in learning English by doing some exercise both at school and at home. c). The students have to try to speak English one to another to practice their pronunciation. Second, For the teachers: a). The teachers have to try another technique or method in order to teaching English. b). The teachers have to improve their skills and knowledge in exploring the class. c). The teachers should be creative in making the interesting class so the students will not get bore. Lastly, For the institution: a). The institution should give the media and also a complete facility in order to support the teaching English process. b). The institution should prepare the kind of books needed both the teacher and the students to support the learning process.

REFERENCES

- Andoko, B. S., Hayashi, Y., Hirashima, T., & Asri, A. N. (2020). Improving English reading for EFL readers with reviewing kit-build concept map. *Research and Practice in Technology Enhanced Learning*, 15(1), 1-19. <https://doi.org/10.1186/S41039-020-00126-8/FIGURES/11>
- Aytaç, A., & Kaygisiz, N. (2021). A Relational Analysis of Teachers' Approaches to Curriculum Design and Classroom Management Styles. *E-International Journal of Educational Research*. <https://doi.org/10.19160/E-IJER.928384>

- Liando, N. V. F., Rorimpandey, R. S., Kumayas, T. A., & Tatipang, D. P. (2022). International Students' Motivation and Self-Confidence in Learning Indonesian. *Hong Kong Journal of Social Sciences*, 60. <http://www.hkjoss.com/index.php/journal/article/view/613>
- Liando, N. V. F., Tatipang, D. P., & Lengkoan, F. (2022). A Study of Translanguaging Practices in an EFL Classroom in Indonesian Context: A Multilingual Concept. *Research and Innovation in Language Learning*, 5(2), 167-185. <https://doi.org/10.33603/RILL.V5I2.6986>
- Liu, T., & Yuizono, T. (2020). Mind Mapping Training's Effects on Reading Ability: Detection Based on Eye Tracking Sensors. *Sensors* 2020, Vol. 20, Page 4422, 20(16), 4422. <https://doi.org/10.3390/S20164422>
- Mahmoud, M., & Mohaidat, T. (2018). The Impact of Electronic Mind Maps on Students' Reading Comprehension. *English Language Teaching*, 11(4), 32-42. <https://doi.org/10.5539/elt.v11n4p32>
- Mishra, P., Singh, U., Pandey, C. M., Mishra, P., & Pandey, G. (2019). Application of Student's t-test, Analysis of Variance, and Covariance. *Annals of Cardiac Anaesthesia*, 22(4), 407. https://doi.org/10.4103/ACA.ACA_94_19
- Mogea, T. (2019). *Educational Supervision: Theories and Practices*. Gramedia. Pustaka.
- Morfidi, E., Mikropoulos, A., & Rogdaki, A. (2017). Using concept mapping to improve poor readers' understanding of expository text. *Education and Information Technologies* 2017 23:1, 23(1), 271-286. <https://doi.org/10.1007/S10639-017-9600-7>
- Murray, D. E., & Christison, M. (2019). What English Language Teachers Need to Know Volume I: Understanding Learning. *What English Language Teachers Need to Know Volume I*. <https://doi.org/10.4324/9781351139847>
- Novianti, A., Adhitya, N., Welianty, Y., Pasundan, S., & Surya Kencana Bakti, S. (2020). Mind Mapping Technique To Enhance Junior High Student's Reading Comprehension. *JELA (Journal of English Language Teaching, Literature and Applied Linguistics)*, 2(2), 1-13. <https://doi.org/10.37742/JELA.V2I2.31>
- Piong, D., & Robiasih, R. H. (2020). The evaluation of two eleventh-grade senior high school textbooks. *Journal of English Language and Pedagogy*, 3(2). <https://doi.org/10.36597/JELP.V3I2.8008>
- Schroeder, N. L., Nesbit, J. C., Anguiano, C. J., & Adesope, O. O. (2017). Studying and Constructing Concept Maps: a Meta-Analysis. *Educational Psychology Review* 2017 30:2, 30(2), 431-455. <https://doi.org/10.1007/S10648-017-9403-9>
- Tatipang, D., Oroh, E. Z., & Liando, N. V. F. (2021). The Application of Mind Mapping Technique to Increase Students' reading Comprehension at The Seventh Grade Of Smp. *KOMPETENSI: Jurnal Bahasa Dan Seni*, 1(03), 389-397.
- Teo, A., Shaw, Y. F., Chen, J., & Wang, D. (2016). Using Concept Mapping to Teach Young EFL Learners Reading Skills. *English Teaching Forum*, 54(2), 20-26. www.youtube.com/watch?v=WIB2IRxAuL0.
- Xu, M., Fralick, D., Zheng, J. Z., Wang, B., Tu, X. M., & Feng, C. (2017). The Differences and Similarities Between Two-Sample T-Test and Paired T-Test. *Shanghai Archives of Psychiatry*, 29(3), 184. <https://doi.org/10.11919/J.ISSN.1002-0829.217070>