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The Effectiveness of Guided Inquiry with Mind Mapping to Improve Science Process Skills and Learning Motivation

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Abstract

Science learning based on the 2013 curriculum is implemented in scientific inquiry to develop scientific work. The purpose of this research is to analyze the effectiveness of guided inquiry model with mind mapping to improve science process skill and student learning motivation. The research is used quasi experimental model with nonequivalent control group design. Data collection methods used in this research include test methods, observation, interviews and documentation. The data were analyzed by using quantitative descriptive analysis. The results showed that the use of guided inquiry model with mind mapping effective to improve science process skill and motivation of fourth grade student of SDN Krobokan. There is a significant difference of science skill score between experimental and control class with significance level of 5%. The acquisition of experimental class obtain N-Gain value of 0.47 in medium category and control class 0.27 in low category. The guided inquiry model with mind mapping is also effective in student learning motivation. This is evidenced by the score of motivation to learn in the experimental class that is 76 on the satisfied category and control class of 72 in good category. The results of correlation test shows a very strong relationship between the science process skills with student learning motivation. It shown from the correlation value of 0.938 with 1% significance level and the direction of positive relationships,. It can be conclude that the higher the score of students' science process skills the higher the student learning motivation.

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INTRODUCTION

Science learning essentially consists of products, processes, and attitudes that require students to do experiment and to solve problems. The scientific process undertaken in science learning to seek knowledge and scientific truth through investigation is called science process skills. In accordance with the objectives of the 2013 curriculum in the class III and IV science subject content standards set forth in the Regulation of the Minister of Education and Culture No. 64 of 2013 expects science learning should be implemented in scientific inquiry to develop scientific work that includes scientific processes and attitudes. Learners are expected to be able to construct the concept of science through scientific work and problem solving.

Findings related to achievement of science in Indonesia based on TIMSS survey results 2015, indicate that Indonesian students are ranked 36 out of 49 countries in terms of performing scientific procedures. From PISA test results and evaluation of 2015, Indonesian students' skills are still low with achievement scores for science, reading and maths ranked 62, 61 and 63 of 69 countries evaluated. Research conducted by Suduc (2015) stated that inquiry-based learning is proven to stimulate student creativity, helping students in constructing meaning and acquiring scientific knowledge. Thus the application of guided inquiry model also has an impact on the improvement of scientific knowledge and understanding of the meaning of the material being taught, because it trains the students to become inquerer and to find a concept based on their experience.

According to Anam (2016) the main feature of the inquiry learning model is to emphasize the maximum student activity to explore and to find which means the student is addresed as the subject of learning and all the activities of the students are directed to seek and find themselves something questionable. This is supported by research conducted by Şimşek & Kabapinar (2010) which proves that Inquiry Based Learning can improve students 'conceptual understanding and develop students' scientific process skills. Another study conducted by Wanga (2015) shows that the application of inquiry-based learning can increase the interest of learning science.

Long & Carlson (2011) stated that students' difficulties lie in the ability to write a summary and determine the relationship between concepts. To overcome this constrain it can be done by using techniques that can equip students with the certain skills to store information received in long-term memory. The use of mind map helps students to create creative material documentation and repeat it at home, making it easier to remember and associate an idea with other ideas in their mind. According to Buzan (2007), mind mapping is the easiest way to put information into the brain and retrieve information out of the brain. " Mind mapping is a creative, effective, and literally creative way of mapping out thoughts. Excess mind mapping according to Bala (2018), among others: (1) information will be better identified, (2) the relationship of each information is easily recognizable, (3) easier to understand and to remember, (4) Accelerate the process of recording because it uses only the key words.

The application of mind mapping techniques to student learning motivation is also supported by research conducted by Keles (2012). Based on the results of his research it shows that by using mind maps will helps teachers to improve the learning plan, process, as well as evaluation which will become more interesting. Based on the background reviews the effectiveness of the guided inquiry model with mind mapping techniques in order to increase the skills of student science processes and student learning motivation become important to be investigated.

METHODS

The research design used in this study is quasi experimental model with nonequivalent control group design. This research was conducted at SDN Krobokan, West Semarang. The population in this study were all students of SDN Krobokan, while the samples were grade IV

A students as control class and IV B as experiment class consisted of 33 and 35 students respectively. Data collection using test and non test methods. The learning of science in the experimental class by using guided inquiry model with mind mapping done for 3 times meeting with different teaching materials. The main stages in the guided inquiry learning model with mind mapping are problem orientation, formulating hypotheses, experimenting, collecting data, analyzing data and making conclusions with mind mapping. The control class, the learning stage using conventional model begins with delivering the teaching materials with the lecture method, then conducting question and answer and students formed into several small groups to discuss the questions contained in the worksheet. Students present the results of the discussion and the teacher helps infer the learning outcomes.

In the initial condition the two samples were given pretest, after that the experimental class received learning using guided inquiry model with mind mapping and control class using conventional learning model. In the final condition, posttest and guided interviews are conducted in both classes to find out whether there is an increase in the science process skill and student learning motivation. The results of pretest and posttest were analyzed using normality test, homogeneity test, N-Gain calculation and test of average difference using independent sample t-test.

RESULTS AND DISCUSSION

Scientific process skills measured in this study include the cognitive domain obtained based on the pretest and posttest results of the students, as well as the psychomotor domain obtained based on experimental class observation during students perform and follow the learning process. From the results of pretest and posttest that have been implemented, then the similarity test and the difference test of two averages by using independent sample t-test. The t-test results is presented in Table 1.

Table 1. t-Test results

Test	Group	Mean	dk	t_{count}	t_{table}
Pre test	Control	64.95	66	0.846	1.99
	Exsperiments	62.31			
Post test	Control	73.94		2.618	
	Exsperiments	80.29			

Based on Table 1 at the pretest stage obtained $t_{count} < t_{table}$ with a significance level of 0.05, so H_a is rejected and H_0 is accepted. This means there is no significant difference in pretest results conducted by the control group and experimental class. Meanwhile, after being given different treatment, obtained the posttest data and t-test with $t_{count} > t_{table}$ with a significant level of 5%, then Ha is accepted, which means there is a significant difference between the average experiment class is better than the average average learning outcomes control class.

The measured science process skill consists of 5 aspects ie observing aspects, classifying aspects of predicting aspects, making conclusions and communicating aspects. The average SPS score of students' cognitive domains is shown in Figure 1.

Based on Figure 1, the highest score in the control class is in the observing aspect while the experimental class is in the communicating aspect. And the lowest score of the control class is the classifying aspect while the experimental class aspect predicts. The low score on the predicting aspects is caused by the lack of creative students in providing alternative answers, this is also due to the limited student learning resources with student books only. The same thing is also disclosed in research conducted by Dewi (2015) which stated that the students' barriers in predicting one of them is the students difficulty in interpreting the data.

Indicators using sensory devices are basic in making observations, all students are able to match what sense devices should be used to observe. This is in accordance with the opinion of Anifah (2015) that the observing skill is a basic skill that must be possessed by everyone in conducting a scientific inquiry. The process of observation is done by using the five senses. Septikasari (2011) added that observing skills are also essential for the development of other process skills, such as prediction, classification,

communication, and infusion skills. The truth of knowledge gained depends on the truth and accuracy of observing results.

The application of guided inquiry model with mind mapping is also closely related to communication skills. When students find a concept, communication skills is required as a tool to convey information to others. The finding is supported by research conducted by Wardani (2016) which shows that inquiry learning guided influence on understanding the concept and activity of students. Ambarsari (2016) demonstrated that communication skills and science achievement increased after being given action through science-based learning model and inquiry. Another study conducted by Muna (2016) also states that guided inquiry learning can be a choice of learning models to develop students' metacognition skills. Based on the results of her research indicates that there is an influence of the application of guided inquiry learning to students' metacognition skills.

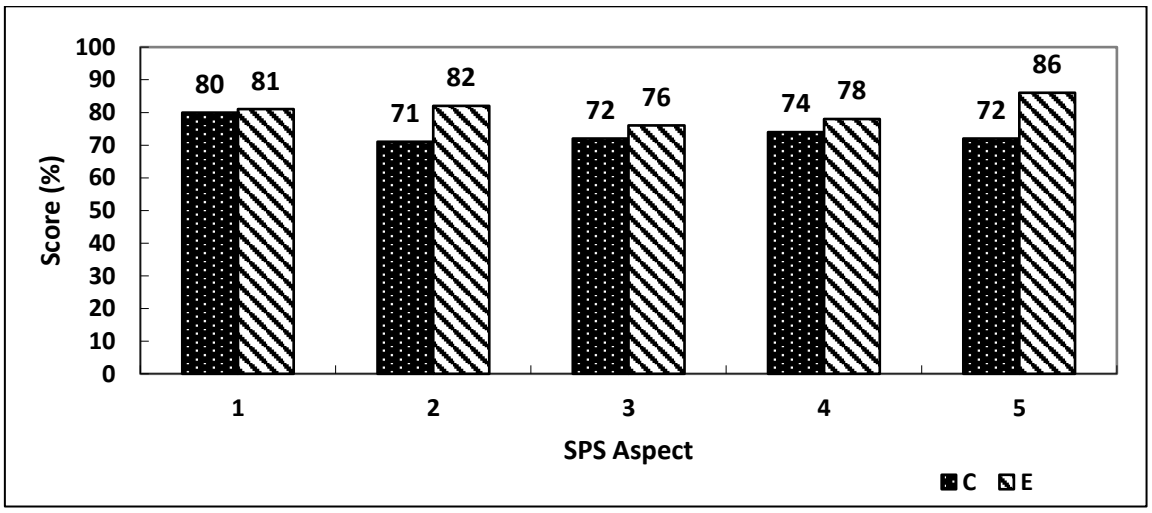

Figure 1. Average KPS Score of Cognitive Domain
(Information: 1. Observing; 2. Classifying; 3. Predicting; 4. Summing up; 5. Communicate)

Overall, the average score of students' science process skills in the experimental class of experimental cognitive is higher than control class. This is seen from the test of two average differences between the experimental class and the control class. Based on independent test sample t-test obtained difference of average score of 5.946. This proves that the learning of guided inquiry model with mind mapping can help students in exploring their science process skill in the cognitive domain. The mean posttest scores of cognitive science process science skills in the control class after treatment were given equal to 74.34, while the average posttest score of the experimental class is 80.28. The result indicates that the guided inquiry model with mind mapping resulted in higher mean scores than the conventional learning model. The difference in mean score of cognitive science process science skills between the control class and the experimental class was calculated using the independent sample t-test based on the student's posttest score. The result is 0.01 < sig 0.05, meaning that there is significant difference between students who experience the learning with guided inquiry model with mind mapping and conventional model.

The skill of the science process for the psychomotor domain is obtained through the observation sheet. In accordance with the results of observations of student activity on science learning in the experimental class, the average score of psychomotor students has increased each meeting. The highest increase is on the classification aspect of the second and third meetings with an increase of 10 points. The increase occurs due to teachers constantly improve the shortcomings that occur in each

learning, so the next lesson is better. The mean SPS score of students psychomotor domain is presented in Figure 2.

Based on the Figure 2 it can be known that acquisition score of science process skills psychomotor domain is the highest that is on the aspect of making conclusions and communicate with achievement level of 83%. The lowest score is predicted on the aspect with an average achievement of 73%. The achievement of science process skills in the psychomotor domain based on observation result during the learning process with guided inquiry mind mapping model in the experimental class showed that the average score was 80.28% with highly skilled category. This means that the use of the guided inquiry mind mapping model is effective in the psychomotor domain of the science process, because the learning model requires students to be active in doing the lab work. So, the use of science process skills during the learning process in experimental class is more frequently than that of control class. Lestari (2018) stated that based on the results of his research, a learning that relates to real-life experiences can improve the skills of science processes and creative thinking of students. The guided inquiry mind mapping learning model is one of the models that provides real experience for students to be able to build their own existing knowledge with new knowledge of the inquiry process.

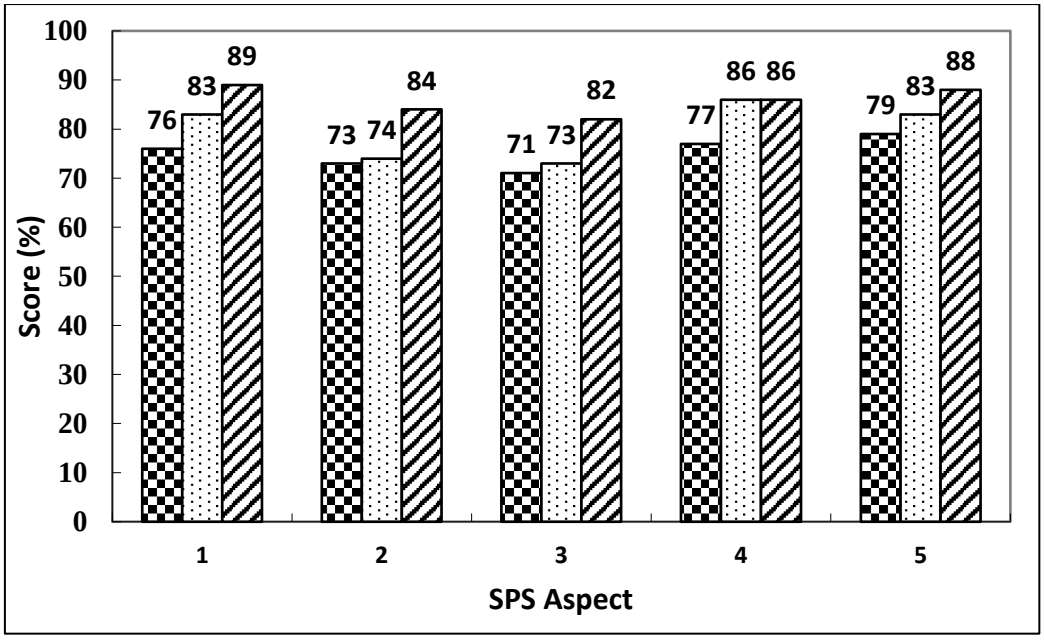

Figure 2. Average KPS Score of Cognitive Domain
(Information: 1. Observing; 2. Classifying; 3. Predicting; 4. Summing up; 5. Communicate)

Furthermore, the improvement of science process skills in the experimental class and control class is calculated using the N-Gain formula. The result of N-gain calculation is presented in Table 2.

Table 2. N-Gain Calculation Results

Group	Result of SPS		(g)	Criteria
	Pretest	Posttest		
Control	65	74	0.27	Low
Experiments	62	80	0.47	Medium

From Table 2, there is an average increase of experimental class learning outcomes of 18 with n-gain values being in medium criteria and an increase in the average of control class learning outcomes by 9 with N-Gain values being at low criteria. Thus shows that the improvement of science process skills in experiment class is higher than control class. This is supported by research conducted by Fathoni (2018) states that Inquiry learning model is useful to encourage student motivation and improve student achievement.

The same result is also founded by Surya (2017) that the application of inquiry model can improve student learning outcomes fourth grade elementary school. In a previous study, Minawati (2014) argued that based on the results of her research showed that the use of Integrated Instruction-based worksheet has a positive effect on the improvement of student learning outcomes. This study uses a student worksheet that contains steps guided inquiry, so as to guide students in carrying out problem-solving based on scientific processes in coherence.

In addition to measuring the skills of the science process, the guided inquiry mind mapping model is also applied to measure students' motivation toward science learning. Based on the results of the guided interviews, the results of the scores presented in Table 3.

Table 3. Student Motivation

Group	Student Motivation	
	Category	Criteria
Control	72	Good
Experiments	76	Very good

Based on Table 3 it is known that the students' learning motivation in the control class after getting the treatment is in good criteria, while the experimental class of students' learning motivation on science learning is at very good criteria. The finding is supported by research from Basam (2017) which stated that the implementation of science literacy learning with inquiry approach is very effective; get positive responses from teachers to science literacy learning and students' response to science literacy learning is also quite positive. The difference between the control class and the experimental class is not significant with the difference of 4 points of motivation score. For an explanation each indicator is presented in Figure 3.

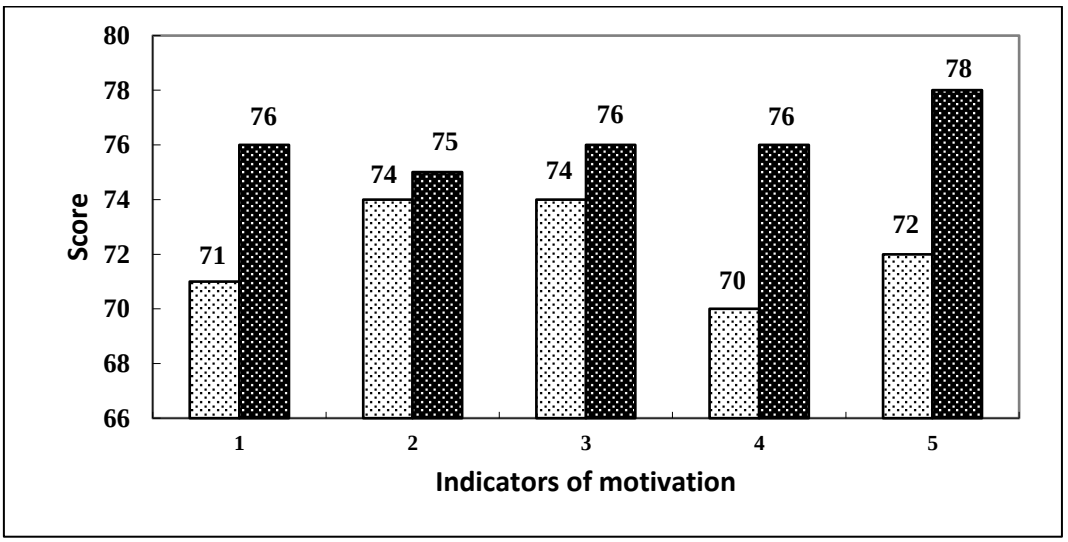

Figure 3. Learning Motivation

Information:
1 : Student interest and attention to the lesson.
2 : The spirit of the students in doing the learning tasks.
3 : Students' responsibilities in carrying out learning tasks.
4 : Student's response to the stimulus provided by the teacher.
5 : Pleasure and satisfaction in doing the assignment.

In the experimental class, the lowest score is in the indicator of student responsibility for the tasks assigned by the teacher, while the highest score in the experimental class is in the pleasure and satisfaction in doing the task given. Students in the experimental class are more pleased with the results of the summary they made due to of the use of mind mapping techniques to make conclusions. Adodo (2013) also explained that the use of mind mapping can help students to associate ideas and train students in creative thinking. Students are more enthusiastic and

passionate about making creative lesson notes with color combinations on the created map. It also makes it easier for students to remember the material they are learning and to help students in communicating the conclusions and the results of the discussion during the presentation in front of the class. In accordance with the theory Buzan (2007) the purpose of using mind mapping can help individuals in planning and make someone more creative and improve memory. Fauziah (2017) proposed that the application of mind-mapping model can also improve students' creativity and understanding.

The use of media strongly supports student learning motivation in learning in the classroom. Agustiya (2017) stated that motivation is the main factor that determines one's learning achievement. So the motivation is very important to be developed during learning. Batdi (2015) argued from the results of his meta analytics which showed that mind mapping has a positive influence on academic achievement, attitude, and motivation of students in learning. Other research that supports the research conducted by Parikh (2016) obtained the result that the use of Mind Mapping techniques more effective than traditional methods in improving academic achievement.

In this research, to know the relation between science process skill and student learning motivation conducted by using product moment correlation test. The test results is presented in Table 4.

Table 4. Product Moment Correlation Test

	Correlation (r)	Respondents	Sig
Scientific proses skill Learning motivation	0.938	30 students	0.01 (1%)

Based on product moment correlation analysis showed a significant positive relationship between the science process skills with the motivation of learning fourth grader of SD Negeri Krobokan, West Semarang. This is evidenced by the result of calculation of correlation test that shows the value of r_{count} bigger than r_{table} 0.461 at significant (α) = 0.01 of 30 respondents and in very strong category. The use of a guided inquiry model in the learning process encourages students to carry out an inquiry process involving the skills of the science process. This can affect the interest and motivation of students in following the learning process. Accompanied by the use of mind mapping techniques that can foster the spirit and motivation of student learning and creativity of students in writing notes. Na'im (2015) stated in the conclusion of his research that there is an increase in the ability of creative thinking and there is a positive response on the implementation of inquiry training model. Yildirim (2014) also pointed out that a scientific research-based research environment affects the ability of scientific processes and improves academic achievement.

In addition in using an inquiry-based model, in this study also accompanied by mind mapping techniques that stimulate creativity and student learning motivation. The same finding is also supported by Rohmad (2014), that the application of mind mapping can significantly improve students' reflective thinking ability. This shows that mind mapping can help students to understand, to clarify concepts, and also to increase students' interest in learning. Another research that supports the research from Priantini (2013) which shows the existence of significant differences in creative thinking skills between students who follow the learning method using Mind Mapping and students who follow conventional learning. Maretasari (2012) also proposed based on the results of hes research that the application of guided inquiry model has a significant positive effect on students' learning outcomes and students' scientific attitudes that are more effective on the skills of science process and student learning motivation.

CONCLUSION

Based on the above study, it can be concluded that guided inquiry model with mind mapping is more effective to improve science process skill and student learning motivation than that of conventional learning model. This is

evidenced by the difference in the average score of science process skills; the acquisition of experimental class N-Gain values is higher than the N-Gain value in the control class; and the experimental level of experiment class motivation is better than the control class. Besides, there is also a very strong relationship and the direction of a positive relationship between the science process skills with student learning motivation, which means that the higher the students' science process skills, the higher the learning motivation.

REFERENCES

Adodo, S O. (2013). Effect of Mind-Mapping as a Self-Regulated Learning Strategy on Students' Achievement in Basic *Science and Technology Mediterranean Journal of Social Sciences,* 4(6), 2039-9340. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/10075

Agustiya F., Sunarso A., & Haryani S. (2017). Influence of CTL Model by Using Monopoly Game Media to The Students' Motivation and Science Learning Outcomes. *Journal Of Primary Education,* 6(2), 114-119. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/17559

Ambarsari, D. (2016). The Implementation Of Scientific Aproach To Improve Communicating And Science Learning Achievement On 4th Grade Students. *Jurnal Pendidikan Guru Sekolah Dasar,* 5(12), 112-121. http://journal.student.uny.ac.id/ojs/index.php/pgsd/article/view/1781

Anam, K. (2016). *Pembelajaran Berbasis Inkuiri Metode dan Aplikasi. Yogyakarta*: Pustaka pelajar.

Anifah, N. (2015). The Improvement Of Observation Skill and Result Learning Of Science Through Guided Discovery Method For Fifth Grade Student Of SDN Kepuhan, Sewon *Jurnal Pendidikan Guru Sekolah Dasar,* 4(5), 1-10. http://journal.student.uny.ac.id/ojs/index.php/pgsd/article/view/469

Bala, R. (2018). *Creative Teaching Mengajar Mengikuti Kemauan Otak.* Jakarta: PT. Grasindo.

Basam F., Rusilowati A., & Ridlo S. (2017). Analysis of Science Literacy Learning with Scientific Inquiry Approach in Increasing Science Competence of Students. *Journal Of Primary Education*, 6(3), 174-184. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/21049

Batdi, V. (2015). A Meta-analysis Study of Mind Mapping Techniques and Traditional Learning Methods. *Anthropologist,* 20(1), 62-68. https://www.tandfonline.com/doi/abs/10.1080/09720073.2015.11891724

Buzan, T. (2007). *Buku Pintar Mind Map.* Jakarta: Gramedia Pustaka

Dewi, R A K., Nugroho S E., & Sulhadi. (2015). Pengaruh Media *Computer Based Instruction* (CBI) Berorientasi Poe Dalam Meningkatkan Motivasi Dan Keterampilan Memprediksi IPA Siswa Kelas IV. *Journal of Primary Education*, 4(2), 139-146. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/10974

Fathoni, I M., Isnarto., Haryani S. (2018). Mathematically Creative Thinking Abilities Students of Elementary School on Learning Inquiry Training Based on Learningstyle. *Journal of Primary Education,* 7(2), 121-128. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/23160

Fauziah, D. N. (2017). Penerapan Model *Mind Map* Untuk Meningkatkan Kreativitas Dan Pemahaman Siswa Pada Materi Sejarah Kerajaan Islam Di Indonesia. *Mimbar Sekolah Dasar*, 4(2), 128-138. http://ejournal.upi.edu/index.php/mimbar/article/view/7767

Hasil Temuan PISA (Programme for International Student Assessment). (2015). *Organisation for Economic Cooperation and Development (OECD)*

Hasil Temuan TIMSS (*Trends in International Mathematics and Science Study).* 2015

Keles, O. (2012). Elementary Teacher's Views on Mind Mapping. *International Journal of Education,* 4(1), 1948-5476. http://www.macrothink.org/journal/index.php/ije/article/view/1327

Lestari, T P., Sarwi., & Sumarti S S. (2018). STEM-Based Project Based Learning Model to Increase Science Process and Creative Thinking Skills of 5 Grade. *Journal Of Primary Education,* 7(1), 18-24. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/21382

Long, D. & Carslon, D. (2011). Mind the Map: How Thinking Maps Affect Student Achievment. *An Online Journal for Teacher Research*, 13(2), 1-6. http://newprairiepress.org/networks/vol13/iss2/2/

Maretasari, E., Subali, B., & Hartono. (2012). Penerapan Model Pembelajaran Inkuiri Terbimbing Berbasis Laboratorium Untuk Meningkatkan Hasil Belajar Dan Sikap Ilmiah Siswa. *Unnes Physics Education Journal,* 1(2), 27-31. https://journal.unnes.ac.id/artikel_sju/upej/1375

Minawati, Z., Haryani, S & Pamelasari, S D. (2014). Pengembangan Lembar Kerja Siswa IPA Terpadu Berbasis Inkuiri Terbimbing Pada Tema Sistem Kahidupan Dalam Tumbuhan Untuk SMP Kelas VIII. *Unnes Sains Education Journal*, 3(3), 587-592. https://journal.unnes.ac.id/artikel_sju/usej/4265

Muna, K., Haryani S., & Susilaningsih E. (2016). Pengaruh *Guided Inquiry Learning* Terhadap Keterampilan Metakognisi Siswa Dalam Materi Kelarutan Dan Hasil Kali Kelarutan. *Journal of Innovative Science Education,* 5(1), 19-27. https://journal.unnes.ac.id/sju/index.php/jise/article/view/13214

Na'im, M. A., Sopyan, A., Linuwih, S. (2015). Implementasi Model *Discovery-Inquiry* Berbasis Pendekatan *Scientific* pada Pembelajaran IPA di Kelas V Sekolah Dasar.*Journal of Primary Education,* 4(2), 104-111. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/10138

Septikasari, Z. (2011). Application Methods Guided Discovery In The Effort Improving Skills Observing Student Learning IPA in *The Fourth Grades* in Primary School. *Jurnal Pendidikan Sekolah Dasar*, 1(2), 1-11. http://journal.uad.ac.id/index.php/JPSD/article/view/2523

Surya, Y. F. (2017). Peningkatan Hasil Belajar Siswa menggunakan Model Inkuiri Sekolah Dasar. *Lembaran Ilmu Kependidikan*, 46(1), 12-15. https://journal.unnes.ac.id/nju/index.php/LIK/article/view/10155

Parikh, N. D. (2016). Effectiveness of Teaching through Mind Mapping Technique. *The International Journal of Indian Psychology,* 3(3), 148-156. oaji.net/articles/2016/1170-1461519892.pdf

Peraturan Meneteri Pendidikan dan Kebudayaan Nomor 64 Tahun 2013 tentang Standar Isi IPA.

Priantini, D.A. (2016). Pengaruh Metode *Mind Mapping* Terhadap Keterampilan Berpikir Kreatif Dan Prestasi Belajar IPS. *e-Journal Program Pascasarjana Universitas Pendidikan Ganesha Jurusan Pendidikan Dasar*, 6(2), 118-131. http://ejournal.undwi.ac.id/index.php/widyaaccarya/article/view/300/0

Rochmad. (2014). Mind Mapping Learning To Increase Mathematical Reflective Thinking Ability Of Junior High School Students. *International Conference on Mathematics, Science, and Education 2014 (ICMSE 2014),* 17-22.

Simşek & Kabapinar. (2010). The effects of inquiry-based learning on elementary students' conceptual understanding of matter, scientific process skills and science attitudes. *Procedia Social and Behavioral Sciences* 2, 1190-1194.

Suduc, A. M. (2015). Inquiry Based Science Learning in Primary Education. *Procedia - Social and Behavioral Sciences,* 205, 474-479.

Wanga, P. H. (2015). Influence of implementing inquiry-based instruction on science learning motivation and interest: a perspective of comparison. *Procedia - Social and Behavioral Sciences*, 174, 1292-1299.

Wardani, S., Setiawan, S., & Supardi, K. I. (2016). Pengaruh Pembelajaran Inkuiri Terbimbing Terhadap Pemahaman Konsep Dan *Oral Activities* Pada Materi Pokok Reaksi Reduksi Dan Oksidasi. *Jurnal Inovasi Pendidikan Kimia,* 10(2), 1743-1750. https://journal.unnes.ac.id/artikel_nju/JIPK/9527

Yildirim, N. (2014). Effects Of Inquiry Based Learning Activities On Scientific Process Skills And Academic Achievement Of Preservice Classroom Teachers. *International Journal Of Academic Research*, 6(6), 46-54. https://www.eu-print.org/orta.php?go=november2014