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The Influence of Guided Inquiry Model Assisted by Animation Media on Science Subjects Towards Curiosity Attitude and Mastery of Science Concepts

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Abstract

This research is based on a fairly low curiosity attitude towards conventional science learning. The renewal of student-centered learning (Guided Inquiry Model) with the help of animation media is needed to increase curiosity and mastery of science concepts. This research aims to find out the influence of guided inquiry models assisted by animation media to increase curiosity and mastery of the science concept of fifth-grade students in SDN 02 Bae Kudus. The design of this study used a quasi-experimental design to measure causal relationships using a non-equivalent control group design. The results of this study found that the average control class was 81.28 compared to the experimental class with an average score of 84.73. Meanwhile, using the t-test with paired samples test obtained mastery of the concept of control class Science of 85.3 in the experimental class with an average score of 85.3. It can be concluded that the guided inquiry model based on animation media is effective to improve students' curiosity attitudes so that students learn so that mastery of science concepts in experimental classes is better compared to in control classes. Furthermore, the average curiosity attitude score in the experimental class was 84.07 greater than in the control class of 78.00. So, it can be concluded that the guided inquiry model based on animation media affects the curiosity attitude toward learning science. Based on the simple linear regression analysis that the significance value of the curiosity attitude variable of 0.000 is smaller than 0.05, so it can be concluded that there is a correlation between curiosity attitudes to mastery of student science concepts.

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INTRODUCTION

Science learning is related to how to know about nature systematically, so science is not only limited to mastery of knowledge groups in the form of facts, concepts, or principles but also a process of discovery (Suryawati, 2013). Science education is expected to be a place for students to learn about themselves and the environment and its application in everyday life. Science education in elementary school is the right place to instill knowledge, attitudes, and skills in students. By studying science students can study themselves, and the surrounding environment, as well as study nature and the phenomena contained in it as a whole (Nurhayati et al., 2017). Science learning in elementary school emphasizes providing a hands-on learning experience through the use and development of process skills and scientific attitudes. Science education is directed at finding out for themselves the answers to questions or problems to help learners to gain a deeper understanding of the environment (living things, objects, or matter, as well as their energy and changes) (Santiasih et al., 2013). Science learning must be able to stimulate students' thinking and language skills, students' sensitivity to social issues and the development of science and technology, problem-solving that occurs in the environment, instilling ethical and aesthetic values, practicing creative attitudes, developing process skills and improving scientific attitudes (Andriani, 2016).

The ability to understand a concept is strongly influenced by a person's thinking ability. While the level of mastery of the expected concept depends on the complexity of the concept and the level of cognitive development of the student (Silaban, 2014). Conventional learning inhibits the development of student thinking. Because the source of information as a learning facility in learning tends to be deductive in the form of symbolic, such as listening to the teacher's explanation or reading. Students memorize a lot, do not understand exactly what they are learning, and cannot develop and use their knowledge in everyday life. Students are not allowed to come up with alternatives or differences in interpretation among students to complex social phenomena (Wiriasa et al., 2017). Erlina et al. (2016) also stated that students' concepts and principles of science become difficult to understand and review. In addition, students are less responsive to asking questions or answering questions from teachers. In the learning process, students tend to do activities that have absolutely nothing to do with learning activities. This condition causes a lack of student learning activities.

Based on preliminary research observations that have been carried out by researchers on February 11 and 12, 2020 in several elementary schools in the Bae subdistrict, especially during science learning in fifth grade, they still use conventional learning where teachers as teacher-centered learning centers with models of lectures, discussions, and assignments. If referring to the nature of science learning that concerns cognitive, affective, and psychomotor aspects, then the learning activity is not yet suitable or under the principles of science. The dominance of teachers in the classroom tends to make the learning process monotonous that only focuses on textbooks and exercises – practice questions in student worksheets. So, many students are only silent because of a lack of motivation in following the learning process. In addition, some students also look more fun talking to their friends when the teacher is explaining in front of the class.

Susanto et al. (2017) stated that the use of learning methods that use principles to know, understand and be skilled in processing facts, concepts, principles, and discovery-based ones is still rarely done by elementary school teachers. Learning is still largely done through the achievement of information while learning that gives students the experience to find and discover new things using all knowledge, skills, and reasoning is still not widely developed in schools, so the expected learning results or competencies are still far from expectations. The application of process science skills for learning in elementary school is associated with

real events or events around it (Handayani & Sumarno, 2016). Ardiyanto (2013) also stated that the teaching and learning process must meet the learning process that is interactive, inspiring, fun, challenging, and motivates students to actively participate, as well as provide sufficient space for the initiative, creativity, and independence under students' talents, interests, and physical and psychological development or according to process standards. The form of learning is designed in such a way that students find the theme of the surrounding environment efficiently. Curiosity, direct experience, and the discovery of concepts independently, will make students understand the concepts they learn and relate them to other concepts they have understood (Putri et al., 2015).

Based on interviews conducted by researchers with several fifth-grade teachers indicate that the school still tends to do the learning process by using only books and student worksheets. Researchers also got information that some of the teachers already know how to learn inquiry, but they still consider that conventional models are more effective for learning to improve student grades, especially in science. So, in reality in the classroom, some teachers tend not to use learning models that keep students active. The same thing was also found that the average formative test scores on the exam at the end of the early semester showed numbers that were still relatively sufficient or were at the middle level for science subjects. Students who pass Minimum Completeness Criteria there are less than 50% of the total number of students in the class.

Oktaviyanti (2016) stated that the ability of elementary school students to conduct actual inquiries is still inadequate. Therefore, you still need guidance from the teacher. A suitable inquiry model is a flexible guided incision. Through guided inquiries, teachers provide guidance and direction to students, so that they can conduct investigation activities. Teachers provide problems, guide students to find questions to be researched, guide in the implementation of investigations, or even guide in recording results. Zaini (2014) also stated that the way teachers are delivered that tend not to actively involve students in the learning process will bring learning to boring conditions and not stimulate the student mindset. Science teachers must have the ability to choose, determine, and at the same time use an approach that can spur active participation of students, or in other words can create learning that can thrill the intellectual, emotional, and social elements of students (Bakar et al., 2015). Teachers should organize a teaching and learning environment to provide a meaningful learning experience (Hacieminoglu, 2019).

Inquiry learning is a process to obtain and obtain information by making observations or experiments to find answers or solve problems to questions or problem formulations using critical and logical thinking skills (Juniati & Widiana, 2017b). Inquiry learning provides students with real and active learning experiences, students are expected to take the initiative. They are trained in solving problems, making decisions, and acquiring skills. Inquisition allows students in various stages of their development to work (Zaini, 2014). Nurhayati et al., (2017) stated that guided inquiry can be one of the alternatives to teaching science innovatively and can improve students' thinking skills, especially critical thinking skills. Suryawati (2013) also stated that science learning through the inquiry process takes precedence so that students can learn from what they do based on their experience so that they can learn with passion and a pleasant atmosphere. The inquiry learning model provides understanding to students in getting to know, and understanding various materials using the scientific approach, that information comes from anywhere, anytime, not dependent on unidirectional information from the teacher (Dewi et al., 2016).

One of the learning media that can be used in the guided inquiry learning model is animation media. Alfiyani et al. (2020) state that interactive learning provision can arouse learning motivation and direct interaction between students and their environment. It can also increase a student's learning interest according to his or her ability to improve

learning achievement. Interactive learning CD-assisted can increase student interest and learning outcomes (Widiyatmoko, 2012).

This research aims to focus on the influence of guided inquiry models assisted by animation media to increase curiosity and mastery of the concept of IPA students at class V elementary school 02 Bae Kudus. This research aims to find out the influence of guided inquiry-based learning assisted by animation media on the understanding of science concepts and students' curiosity attitudes toward water cycle materials in grade V elementary school and to find out the correlation between understanding science concepts and the curiosity attitude of elementary school V students after the implementation of guided inquiry learning with the help of animation media. This research is expected to be a breakthrough to improve the development of science concepts and science process skills and student curiosity and critical attitudes, increase student cooperation, train students to express opinions and think critically and provide an interesting and conducive learning atmosphere in learning, thus creating a teaching and learning process that prioritizes student activeness. Research is also expected to be used to improve the role of teachers as good facilitators, providing insights and skills to make learning more interesting to improve students' critical attitude toward learning in the classroom.

METHODS

The population taken was elementary school fifth-grade students in Kudus Regency in the second semester of the 2019/2020 school year. Under the 2013 curriculum, the determination of fifth-grade students as a study population is due to fifth-grade elementary school getting water cycle materials, so the improvement of the inquiry learning process guided by assisted animation media can be seen to increase. Sampling uses purposive sampling techniques because it considers the number of students, the state of the students, and the condition of the field. So, SD 3 Bae and SD 2 Dersalam was chosed as the two elementarysubject of research.

The variables used are dependent variables in the form of mastery of science concepts and students' curiosity attitudes and independent variables in the form of guided inquiry learning models assisted by animation media. The data collection instruments in this study used: elevation sheets, interview sheets, pre-test questions, and post-test questions. Observation sheets are used to find out students' curious attitudes during learning. Interview instruments are used to extract information from teachers about the implementation of learning models and student responses regarding those implementations. Test instruments are used to measure basic abilities and achievements or achievements.

The analysis of the data used to answer problem formulation questions in this study uses descriptive analysis. Descriptive statistical analysis is a statistic used to analyze data by describing or describing the data as it is without intending to make generally accepted conclusions. Hypothesis tests used in the form of inferential statistical analysis are used to test research hypotheses using the t-test. Hypothesis testing to answer research hypotheses that have been submitted with the help of computers with the SPSS program version 25. The analysis includes classical assumption tests, t-tests, and regression analysis using the SPSS 25 program.

RESULTS AND DISCUSSION

This research was carried out in two schools, namely SDN 2 Bae and SDN 3 Dersalam which are both located in Kedistrict Bae Kabupaten Kudus. The subjects of this study are students of fifth-grade SDN 2 Bae as an Experimental class and students of fifth-grade SDN 3 Dersalam as a control class. The effectiveness of the guided inquiry learning model assisted by animation media on the attitude of curiosity and mastery of student learning concepts was analyzed using impact measures to find out whether there was an increased impact on learning curiosity attitudes

and on experimental groups and treatment control groups from the implementation of guided inquiry learning models assisted by animation media. The results of the analysis of the effectiveness of the guided inquiry learning model assisted by animation media on students' curiosity attitudes are presented in Table 1.

Table 1. Application of Animated Media-Based Guided Inquiry Model to Student Curiosity Attitude

Indicator	Experiment N-Gain score	Control N-Gain score
Curious Attitude	32.9	18.8
Science Concept	39.2	24.7

In Table 1. It can be seen that the use of animation media is very influential on students' curiosity attitudes. The N-Gain scores of the experimental class and the control class increased. Curiosity is one of the scientific characteristics that must be possessed by students. Solehudin et al. (2019) state that the characteristics essential to be constantly observed along with the development of learning innovations by improving pedagogical competencies that pay attention to aspects of students' needs, teaching ability, and students' perspective on learning. Silmi & Kusmarni (2017) also stated that the use of learning media will certainly attract more students to learning and that students are invited to think critically to explore the information conveyed in the interactive media.

The average curiosity score in the experimental class was better than the control class and showed a significant increase in the score. This is because learning with a guided inquiry model makes students better trained in discovering concepts themselves in the material they are learning through animation media. Febriawan & Hadi (2016) stated that if there is a teaching and learning process with guided inquiries, students are required to find concepts through instructions as necessary from a teacher. The instructions are generally in the form of questions that lead to the development of investigation activities carried out by students. The establishment of guided inquiry learning models has an impact on improving scientific knowledge and understanding of the meaning of the material being taught, as it trains students to become investigators and discover concepts based on their experience (Prastiwi et al., 2018). Santiasih et al. (2013) also state that guided inquiry learning models in IPA learning can significantly improve students' scientific attitudes compared to students taught using conventional learning models. By providing new objects in learning, students can develop an attitude of curiosity and discuss the results of investigations to provide opportunities for students to think critically. Rupilu (2012) states that guided inquiry learning models can develop a better scientific attitude than conventional learning models.

The implementation of the guided inquiry learning model assisted by animation media in improving the mastery of the IPA concept is analyzed with the t-test test and the Paired Sample Test. The results of this analysis can be seen in Figure 1 and 2.

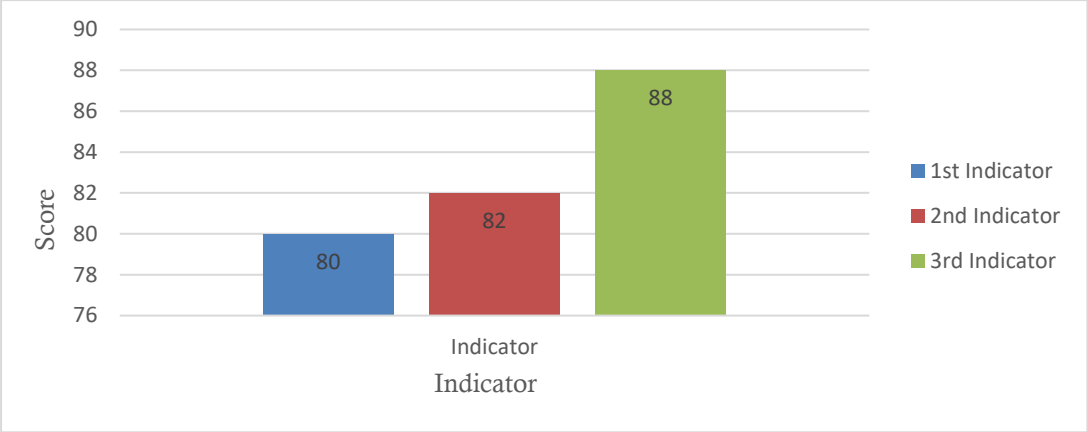

Figure 1. Curiosity Average Score

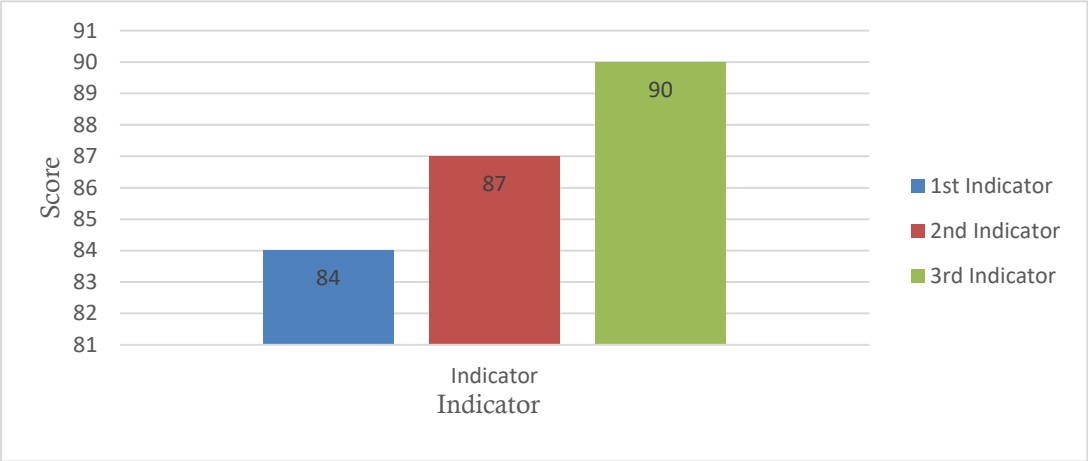

Figure 2. Science Concept Mastery Average Score

In Figure 1 and 2., the average value of the experimental class is higher than that of the control class. This shows that the use of guided inquiry learning models is better than conventional learning models, although the same uses animation media in the learning process. This is because in learning using the guided inquiry model, students actively conduct investigations about the basic concepts that become learning materials. Meri & Wulan (2019) stated that self-preservation in the process of acquiring knowledge and finding the learned concepts provides retention of the concepts obtained so that it is longer than the acquisition of knowledge that is only obtained from teacher explanations. Mastery of concepts is the basis of understanding principles and theories, meaning that to be able to understand principles and theories must be understood in advance the concepts that make up the principles and theories concerned (Marnita, 2017). Mastery of concepts will make students able to recognize correct and incorrect calculation procedures or processes and be able to express and interpret ideas to provide simple inductive and deductive reasons either orally, in writing, or by demonstrating (Arisanti et al., 2017). This results in the concepts that students have learned being deeply embedded in students' memories and more memorable for the student experience so that students can easily dig back into concepts they find when needed.

The average N-Gain score of the experimental class is also higher than the control class with the same significance value – equal to < 0,05. This means that the use of guided inquiry learning models is proven to be better at improving students' mastery of Scence concepts than learning with conventional models. Rahmani et al. (2015) state that students' experience when conducting experimental activities can foster their motivation to learn better so that science process skills can be achieved. Afriani et al. (2019) also state that during teaching and learning activities students are more active and explore their activities more. Some students enjoy learning with guided inquiry laboratory activities with embedded videos, making it easier for students to absorb new knowledge. Student initiatives to study alone as well as in groups are also increasing, students try to find as many references as possible to materials that are not yet understood. Students' curiosity becomes higher when completing tasks given by teachers and in discussions. Students look more eager to learn because at the beginning of the meeting the teacher has emphasized to students to pursue the target of getting higher grades (Sugiarto et al., 2017).

The influence of students' curiosity attitudes on the mastery of student science concepts is calculated using simple linearregression analysis. The results of simple linear regression analysis show a significance value of 0,000 with an R square score of 0,084. The results showed that students' curiosity attitudes had a significant effect on understanding the concept of science in elementary school with the learning of guided inquiry models based on interactive media. Students' curiosity attitude affects their understanding of science concepts by 84%, while 16% is influenced by other factors. Student curiosity becomes one of the very important factors in understanding concepts during the learning process. Solehudin et al. (2019) state that rasa curiosity becomes one of the important factors as a bridge in pedagogical education because it is the core of education and learning. The character or attitude of a student will greatly affect the success and achievement in the learning process. One of these characteristics is a high curiosity attitude that will increase his learning activities towards a subject (Novelyya, 2019).

A good learning process should be able to increase students' curiosity so that they can make mastery of concepts deeper. This causes students' learning outcomes to be better. Increased curiosity, under the theory that says that contextual approaches can increase learning motivation and hands-on problem-solving hone students' curiosity in solving problems (Ardiyanto, 2013). Dwi Arini et al. (2020) state that naturally elementary students have a strong curiosity and are interested in the world around them. Curiosity varies greatly, depending on what catches his attention. Curiosity is the initial capital for students in the learning process. Therefore, curiosity is one of the internal factors that affect students' learning outcomes.

The results of the data analysis also proved that there is a significant relationship between the character of curiosity and the understanding of concepts that greatly affect student learning outcomes. Fandakova & Gruber (2021) states that curiosity and interest have a positive effect on learning and memory in childhood and adolescence. Wijayama (2020) stated that in the learning process, the increase in curiosity possessed by students during the learning process is directly proportional to student learning outcomes. Pamungkas et al. (2017) also stated that with the curiosity of students, they will ask many questions to teachers, friends, or find out from various other sources, so that they will find the answer and find a lot of information or knowledge that can support their learning achievements.

The use of interactive media-based guided inquiry learning models in this study proved to significantly improve curiosity, understanding of concepts, and learning outcomes in grade V elementary school students. Juniati & Widiana (2017a) stated that the teaching of inquiries proved to be able to assist students in formulating questions, finding answers or

solutions to satisfy their curiosity so that students can prove existing theories, ideas possessed, as well as the results of investigations about the material being studied. Susanto et al. (2017) also stated that there was a difference in cognitive learning outcomes between the group of students who were presented using the guided inquiry method and the group of students who were presented with the expository method. This is because, in the guided inquiry learning model, students become trained to build material concepts according to the understanding they arrange under the direction of their teachers. The process taken by students when trying to understand the content of learning is in line with the forms of skills that must be developed.

Science learning reflected guided inquiry model can improve the skills of the science process and understanding of student concepts because the learning activities of guided inquiry models can provide opportunities for students to explore the abilities they have with the guidance of teachers, to improve the mastery of student concepts (Oktaviyanti, 2016). Kurniasari (2015) stated that there is no influence of the environmentally-based guided inquiry learning model on understanding concepts because the guided inquiry learning model succeeds in developing character, namely hard work, environmental care, and curiosity. The character can affect the results of problem-solving investigations conducted by students during the learning process with guided inquiries.

This research has successfully proven the influence of guided inquiry models assisted by animation media to increase curiosity and mastery of the science concept. Afriani et al. (2019) state that during the teaching and learning process using guided inquiry methods, students are stimulated to make scientific statements, collect and analyze data from hypotheses, design and conduct scientific investigations, formulate explanations and convey arguments. These activities result in the understanding of the science concept in students becoming deeper so that student learning outcomes can improve. Increased curiosity is also directly proportional to the mastery of science concept and student learning outcomes. Gumilar & Wardani (2019) states that there is an influence on the mastery of concepts, scientific attitudes, and the skills of student science processes after a guided investigation approach has been applied to the media in the school environment. This is under the research conducted because this study also used interactive media in the learning process using the guided inquiry learning model.

The guided inquiry learning model is appropriate for students who are not used to doing inquiry. Therefore, students receive guidance starting from formulating hypotheses to making conclusions. However, students get guidance from the teacher, when experiencing difficulties during learning (Rupilu, 2012). Guided Inquiry-based learning based on interactive media directly influences student learning conditions, which also affects learning outcomes (Alfiyani et al., 2020). The teacher should devise activities refer to activities found for learning to be better than just recite the entire process and cultivate knowledge. This effort will encourage students to have meaningful knowledge through mastery of concepts, scientific processes, and attitude skills of student (Gumilar & Wardani, 2019).

CONCLUSION

Based on an analysis of the data using a measure of the impact on students' curiosity attitudes, an average N-Gain score of 39,2 and a control class of 24,7 was obtained. The results of the t-test with the Paired Samples Test obtained a significance value of 0,000. From these results, it can be concluded that the guided Inquiry learning model based on animation media is effective to improve students' curiosity attitudes.

Mastery of the science concept in experimental class students obtained a score of 84,7 with a significance level of 0,000 and an N-Gain score of 39,2 while the control class obtained a score of 81,3 with a significance level of 0,000 and an N-Gain score of 19,7 so that it can be concluded that the guided Inquiry

learning model based on animation media is effective to improve mastery of the science concept.

The results of the simple linear regression obtained a significance value from the curiosity attitude variable of 0,000 with an average score of 76,03 and the average score of the interest k student IPA concept 84,73. From these results, it can be concluded that there is a correlation between curiosity attitudes toward mastery of student science concepts.

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REFERENCES

Afriani, T., Agustin, R. R., & Eliyawati, E. (2019). The Effect of Guided Inquiry Laboratory Activity with Video Embedded on Students' Understanding and Motivation in Learning Light and Optics. *Journal of Science Learning*, *2*(3), 79–84. https://doi.org/10.17509/jsl.v2i3.15144

Alfiyani, P., Sulistyorini, S., & Subali, B. (2020). The Effectiveness of Guided Inquiry-Based of Interactive Media to Increase Interests and Learning Outcomes. *Journal of Primary Education*, *9*(4), 398–407. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/41137

Andriani, I. (2016). Pendekatan Keterampilan Proses Untuk Sekolah Dasar. *Jurnal Pendidikan Guru Sekolah Dasar*, *1*(1), 84–93.

Ardiyanto, D. S. (2013). Pembelajaran Matematika dengan Pendekatan Kontekstual Berbantuan Hands on Problem Solving untuk Meningkatkan Rasa Ingin Tahu Dan Prestasi Belajar Siswa. In *Prosiding Universitas Yogyakarta*.

Arisanti, W. O. L., Sopandi, W., & Widodo, A. (2017). Analisis Penguasaan Konsep Dan Keterampilan Berpikir Kreatif Siswa Sd Melalui Project Based Learning. *EduHumaniora | Jurnal Pendidikan Dasar Kampus Cibiru*, *8*(1), 82. https://doi.org/10.17509/eh.v8i1.5125

Bakar, A., Halim, A., & Mursal. (2015). Penerapan Pendekatan Ketrampilan Proses Untuk Meningkatkan Ketrampilan Proses Sains Dan Penguasaan Konsep Siswa Smp Pada Konsep Tekanan. *Jurnal Pendidikan Sains Indonesia*, *03*(01), 1–6.

Dewi, N. P. S., Putra, I. K. A., & Wiarta, I. W. (2016). Model Pembelajaran Inkuiri Berbasis Lingkungan Sekolah Dapat Meningkatkan Hasil Belajar Keterampilan Menulis Dalam Bahasa Indonesia. *E-Journal PGSD Universitas Ganesha*, *4*(1), 1–9.

Dwi Arini, N. K. A., Murda, I. N., & Tri Agustiana, I. G. A. (2020). Korelasi Antara Rasa Ingin Tahu dan Motivasi Belajar dengan Hasil Belajar IPA Siswa Kelas V. *Jurnal Mimbar Ilmu*, *25*(1), 20–31. https://doi.org/10.23887/mi.v25i1.24472

Erlina, Rede, A., & Saehana, S. (2016). Penerapan Model Pembelajaran Inkuiri Terbimbing untuk Meningkatkan Aktivitas dan Hasil Belajar IPA Fisika Siswa SMP. *E-Jurnal Mitra Sains*, *4*(1), 1–7. https://doi.org/10.36709/jipfi.v4i1.14138

Fandakova, Y., & Gruber, M. J. (2021). States of curiosity and interest enhance memory

differently in adolescents and in children. *Developmental Science*, *24*(1), 1–15. https://doi.org/10.1111/desc.13005

Febriawan, Y., & Hadi, S. (2016). Pembelajaran Inkuiri Terbimbing V SDN Balonggemek1 Jombang. *Jurnal Pendidikan: Teori, Penelitian Dan Pengembangan*, *1*(9), 1739–1743.

Gumilar, R. P., & Wardani, S. (2019). The Implementation of Guided Inquiry Learning Models on The Concept Mastery, Scientific Attitude, and Science Process Skill. *Journal of Primary Education*, *8*(5), 148-`154.

Hacieminoglu, E. (2019). Student and school level variables related to elementary school students' attitudes towards science. *Eurasian Journal of Educational Research*, *80*, 59–88. https://doi.org/10.14689/ejer.2019.80.4

Handayani, S., & Sumarno. (2016). Pengembangan Model Pembelajaran Siklus Belajar Terhadap Peningkatan Ketrampilan Berpikir Rasional Anak Sekolah Dasar. *Jurnal Pendidikan Sains Universitas Muhammadiyah*, *4*(2), 55–76.

Juniati, N. W., & Widiana, I. W. (2017a). Penerapan Model Pembelajaran Inkuiri Untuk Meningkatkan Hasil Belajar Ipa. *Journal of Education Action Research*, *1*(2), 122. https://doi.org/10.23887/jear.v1i2.12045

Juniati, N. W., & Widiana, I. W. (2017b). Penerapan Model Pembelajaran Inkuiri Untuk Meningkatkan Hasil Belajar IPA. *Jurnal Ilmiah Sekolah Dasar*, *1*(1), 20. https://doi.org/10.23887/jisd.v1i1.10126

Kurniasari, K. (2015). Pengaruh Model Pembelajaran Inkuiri Terbimbing Berbasis Lingkungan Terhadap Kemampuan Pemahaman Konsep Dan Karakter Pada Siswa Kelas V Sd. *Journal of Primary Education*, *4*(2), 132–138.

Marnita, M. (2017). Model Pembelajaran Reflektif Learning Untuk Meningkatkan Keterampilan Proses Sains Dan Penguasaan Konsep Siswa Pokok Bahasan Kalor Dan Perpindahannya …. *Jurnal Pendidikan Almuslim*, *V*(1), 23–29. http://jfkip.umuslim.ac.id/index.php/jupa/article/view/207

Meri, Y. N., & Wulan, A. R. (2019). Penerapan Model Pembelajaran Brain Based Learning Menggunakan Pembelajaran Ipa Terpadu Tipe Webbed Dan Connected Pada Materi Pemanasan Global Untuk Meningkatkan Penguasaan Konsep Dan Kps. *Edusains*, *8*(2), 128–135. https://doi.org/10.15408/es.v8i2.1811

Novelyya, S. (2019). Pengaruh Karakter Rasa Ingin Tahu Siswa Terhadap Hasil Belajar Mata Pelajaran IPA Fisika di SMP Negeri 08 Muaro Jambi. *BRILLIANT: Jurnal Riset Dan Konseptual*, *4*(2), 174–181.

Nurhayati, A. R., Jayadinata, A. K., & Sujana, A. (2017). Penerapan Inkuiri Terbimbing Dalam Meningkatkan Keterampilan Berpikir Kritis Siswa Kelas V Pada Materi Daur Air. *Jurnal Pena Ilmiah*, *2*(1), 1061–1070.

Oktaviyanti, R. (2016). Pengembangan Perangkat Pembelajaran Model Inkuiri Terbimbing Berefleksi Pada Materi Konduktor Dan Isolator Panas. *Journal of Primary Education*, *2*(1), 166–173.

Pamungkas, M. S. H., Mulyani, S., & Saputro, S. (2017). Penerapan Model Pembelajaran Poe Dengan Metode Praktikum Untuk Meningkatkan Rasa Ingin Tahu Dan Prestasi Belajar Kimia Siswa. *Paedagogia*, *20*(1), 46–60. https://doi.org/10.20961/paedagogia.v20i1.16596

Prastiwi, D., Haryani, S., & Lisdiana, L. (2018). The Effectiveness of Guided Inquiry with Mind Mapping to Improve Science Process Skills and Learning Motivation. *Journal of Primary Education*, *7*(2), 195–203. https://journal.unnes.ac.id/sju/index.php/jpe/article/view/23535

Putri, N. M. S. A., Dantes, N., & Tika, N. (2015). Pengaruh Implementasi Pembelajaran Tematik Berbasis Lingkungan Terhadap Hasil Belajar IPA

Ditinjau dari Sikap Ilmiah Siswa Kelas IV SD Gugus I Kecamatan Kuta. *Jurnal Pendidikan Dasar Ganesha*, *5*(1), 1–10.

Rahmani, Halim, A., & Jalil, Z. (2015). Penerapan Model Pembelajaran Inkuiri Terbimbing Untuk Meningkatkan Keterampilan Proses Sains dan Motivasi Belajar Siswa Sekolah Dasar. *Jurnal Pendidikan Sains Indonesia*, *03*(01), 158–168. https://doi.org/10.33578/jpfkip.v10i2.8250

Rupilu, N. P. E. M. (2012). Pengaruh Model Pembelajaran Guided Inquiry Terhadap Kemampuan Berpikir Formal dan Sikap Ilmiah Siswa. *Jurnal Pendidikan Dan Pembalajaran IPA Indonesia*, *2*(2), 1–14. https://doi.org/10.22202/economica.2017.v6.i1.1941

Santiasih, N. ., Marhaeni, A. A. I. ., & Tika, I. . (2013). Pengaruh Model Pembelajaran Inkuiri Terbimbing Terhadap Sikap Ilmiah Dan Hasil Belajar IPA Siswa Kelas V SD No. 1 Kerobokan Kecamatan Kuta Utara Kabupaten Badung Tahun Pelajaran 2013/2014. *E-Journal Program Pascasarjana Universitas Pendidikan Ganesha*, *3*(1), 1–11. https://www.academia.edu/4879643/ _

Silaban, B. (2014). Hubungan Antara Penguasaan Konsep Fisika Dan Kreativitas Dengan Kemampuan Memecahkan Masalah Pada Materi Pokok Listrik Statis. *Jurnal Penelitian Bidang Pendidikan*, *20*(1), 65–75.

Silmi, M., & Kusmarni, Y. (2017). Menumbuhkan Karakter Rasa Ingin Tahu Siswa Dalam Pembelajaran Sejarah Melalui Media Puzzle. *FACTUM: Jurnal Sejarah Dan Pendidikan Sejarah*, *6*(2), 230–242. https://doi.org/10.17509/factum.v6i2.9980

Solehudin, T., Triwoelandari, R., & Kosim, A. M. (2019). Pengembangan Media Pembelajaran Interaktif Prezi untuk Menumbuhkan Karakter Rasa Ingin Tahu. *Indonesian Journal of Learning Education and Counseling*, *2*(2), 163–171. https://doi.org/10.31960/ijolec.v2i2.261

Sugiarto, D. H., Suryadi, B. U., S, A. N. C., & Paerah. (2017). Penerapan Model Pembelajaran Quantum Teaching Untuk Meningkatkan Rasa Ingin Tahu Dan Prestasi Belajar Siswa Pada Materi Koloid Kelas Xi Ipa Sma Negeri 3 Boyolali. *Jurnal Pendidikan Kimia*, *6*(1), 24–30.

Suryawati, E. (2013). Implementasi Pembelajaran Kontekstual RANGKA untuk Meningkatkan Keterampilan Proses Sains , Pemecahan Masalah, dan Penguasaan Konsep IPA. *Jurnal Pendidikan Dan Pembelajaran*, *20*(2), 180–189.

Susanto, H., Sa'dijah, C., & Gipayana, M. (2017). Pengaruh Penggunaan Metode Guided Inquiry Dan Gaya Berpikir Terhadap Hasil Belajar Kognitif Kelas V. *Jurnal Pendidikan:: Teori, Penelitian, Dan Pengembangan*, *2*(2), 1201–1211.

Widiyatmoko, A. (2012). Pengembangan Perangkat Pembelajaran Ipa Fisika Dengan Pendekatan Physics-Edutainment Berbantuan Cd Pembelajaran Interaktif. *Journal of Primary Education*, *1*(1). https://doi.org/10.15294/jpe.v1i1.54

Wijayama, B. (2020). Peningkatan Hasil Belajar Ipa Dan Karakter Rasa Ingin Tahu Melalui Model Problem Based Learning Peserta Didik Kelas Vi. *Jurnal Kreatif : Jurnal Kependidikan Dasar*, *10*(2), 190–198.

Wiriasa, I. G. P. J., Dantes, N., & Arnyana, I. (2017). Pengaruh Implementasi Teknik Team Quiz Terhadap Hasil Belajar IPA Ditinjau Dari Sikap Ilmiah Siswa Kelas VI SD Gugus I Kecamatan Kuta Selatan. *Jurnal Pendidikan*, *7*(1).

Zaini, M. (2014). Model inkuiri terbimbing dalam pembelajaran konsep penghematan air di kelas v sekolah dasar. *Jurnal Sekolah Dasar*, *23*(1), 85–95.