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The Effect of The Implementation of Guided Inquiry-Based Worksheet on The Empire Ability and Self-Efficacy of High School Students

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ABSTRAK

Tujuan penelitian ini untuk menyelidiki pengaruh implementasi LKS berbasis Inkuiri terbimbing terhadap (1) kemampuan abstraksi empiris dan (2) *self-efficacy* siswa secara terpisah. Penelitian ini merupakan penelitian eksperimen semu dengan tipe desain *nonequivalent control group* dengan sampel 33 siswa sebagai kelas eksperimen dan 32 siswa sebagai kelas kontrol. Data diperoleh melalui pemberian tes dan penyebaran angket sebelum dan sesudah perlakuan. Hasil tes dan angket dianalisis menggunakan uji asumsi (normalitas dan homogenitas) sebelum dan sesudah pembelajaran dan uji hipotesis perbedaan rata-rata dua populasi. Hasil uji homogenitas baik sebelum dan sesudah pembelajaran diperoleh bahwa variansi kedua kelas homogen baik pada data angket maupun tes. Uji normalitas angket *self-efficacy* sebelum dan sesudah pembelajaran menunjukkan sebaran data yang normal. Hasil pretes menunjukkan kedua data berdistribusi normal, namun demikian pada posttest data tidak berdistribusi normal. Data *self-efficacy* dianalisis menggunakan uji t sedangkan data abstraksi empiris dianalisis menggunakan uji Mann Whitney. Hasil yang diperoleh pada penelitian ini adalah (1) penggunaan LKS berbasis inkuiri terbimbing secara signifikan berpengaruh positif terhadap kemampuan abstraksi empiris siswa. (2) Penggunaan LKS inkuiri terbimbing juga secara signifikan berpengaruh positif terhadap *self-efficacy* siswa.

Kata Kunci : abstraksi empiris; LKS inkuiri terbimbing; *self-efficacy*

ABSTRACT

The purpose of this research is to investigate the effect of implementing guided inquiry-based worksheets on (1) empirical abstraction ability and (2) students' self-efficacy separately. This research is a quasi-experimental research with a nonequivalent control group design type with a sample of 33 students as the experimental class and 32 students as the control class. The data were obtained through the provision of tests and the distribution of questionnaires before and after treatment. The results of the tests and questionnaires were analyzed using assumption tests (normality and homogeneity) before and after learning and hypothesis testing of the difference in the mean of the two populations. The results of the homogeneity test both before and after learning were obtained that the variance of the two classes was homogeneous, both in the questionnaire and test data. The normality test of the self-efficacy questionnaire before and after learning showed a normal distribution of data. The results of the pretest showed that both data were normally distributed, however in the posttest the data were not normally distributed. The self-efficacy data were analyzed using the t-test, while the empirical abstraction data were analyzed using the Mann-Whitney test. The results obtained in this study were (1) the use of guided inquiry-based worksheets had a significant positive effect on students' empirical abstraction abilities. (2) The use of guided inquiry worksheets also has a significant positive effect on students' self-efficacy.

Keywords: empirical abstraction; guided inquiry worksheets; self-efficacy

INTRODUCTION

The Covid-19 pandemic has caused learning in various parts of the world, including Indonesia, to be carried out online (Septian et al., 2022; Septian & Maghfirah, 2021). Many things have to be adjusted in online learning, including learning references Teachers need to facilitate students by preparing teaching materials that must be adapted to student conditions and online learning where students are expected to be able to study independently (Suweken, 2021).

One of an alternative learning resources that can help students learn online are worksheets . Student Worksheet (LKS) is a sheet that contains instructions for students to complete the activities that have been planned (Darusman, 2008). LKS aims to train students' learning independence and increase students' understanding of the material provided (Abadi Prastowo, 2014; Tsany et al., 2020).

The use of LKS is expected to be able to provide opportunities for students to learn and have a positive impact during the online learning process (Sadiyyah et al., 2019). But, based on the results of interviews with several high school students, the worksheets used in learning mathematics are less varied and confuse students to study independently (Septian & Gustiana, 2022). Students find it difficult to learn mathematics independently at home and ignore teacher explanations when online learning takes reference (Suryawan & Permana, 2020).

Mathematics for most students is an abstract, theoretical science, with symbols and formulas that are difficult and confusing (D. R. Dewi, 2010; Rahmawati, 2018; Rohmah et al., 2020). Abstraction ability cannot be separated from knowledge of a concept because abstraction requires the ability to imagine or describe events that do not always occur physically. Mathematical abstraction ability is the ability of students to understand concepts and construct new concepts to find relationships (Annas et al., 2018). The ability to think abstractly describes what does not necessarily exist physically and cannot be separated from the ability of objects (Yunita, 2017). Therefore, the perception of most students can be overcome by increasing students' abstraction skills.

The challenge in mathematical abstraction abilities is the lack of opportunities for students to develop skills in solving a problem (Nurhikmayati, 2017). The lack of involvement of students in the formation of mathematical abstractions causes students to not be able to visualize mathematical symbols into a mathematical model properly (Komala & Sarmini, 2020). Indicators of mathematical abstraction ability consist of reflective abstraction, empirical abstraction, and theoretical abstraction (Gray & Tall, 2007). The focus of this research is the ability of empirical abstraction.

Empirical abstraction is closely related to empirical experience. Empirical abstraction ability is the ability of students to acquire knowledge with the subject's experience of seeing objects (Gray & Tall, 2007). Students can understand a concept if the problems posed are by the experiences of students' daily lives (Julyanasari et al., 2019). In the context of mathematics, a concrete experience is not defined by its physical form or characteristics in the real world but by how much it relates to other mathematical ideas or situations.

In addition to the cognitive domain, students are also required to have self-efficacy to facilitate success in participating in online learning. Today's online learning can run smoothly if students have self-efficacy or the ability to mobilize the motivation, cognitive

abilities, and actions needed to meet the demands of the situation. Self-efficacy has an important role in determining student success in doing assignments (Ningrum & Rahmawati, 2021). Mathematical self-efficacy is a self-concept related to an individual's belief in his or her ability to perform or complete a mathematical task or problem (Pardimin, 2018).

As a result of the previous explanation, teachers need to innovate in learning management. One of these innovations is designing LKS based on guided inquiry. In guided inquiry-based learning, teachers participate in learning activities carried out by students (Pawuri, 2013). The inquiry learning model is a learning process that begins with activities to formulate problems, develop hypotheses, collect evidence, test hypotheses, draw and test temporary conclusions and write conclusions (Fahyuni, 2016). Guided inquiry learning activities emphasize critical and analytical thinking processes to find definite answers for themselves to the problems asked (Sanjaya, 2006). Thus, the inquiry learning step is expected to facilitate students' abstraction skills.

Many studies have shown that inquiry learning has a good influence on abstraction abilities and self-efficacy. In chemistry learning, the inquiry learning model has a positive effect on students' self-efficacy (Ika et al., 2017). Students have a good category of self-efficacy when applying inquiry-based learning (Jumroh et al., 2018). Inquiry-based learning is effective on students' self-efficacy in learning geometry (Kandil & Işıksal-Bostan, 2019). In addition, inquiry-based learning is effective on the self-efficacy of high school students (Sulistiyo & Wijaya, 2020). However, there is no research that applies inquiry-based mathematics learning that focuses on student worksheets to see the self-efficacy of high school students.

The development of teaching materials with guided discovery can effectively improve abstraction skills (Kusumawati & Kurniawan, 2020). However, there has been no research that has examined the effect of inquiry learning on self-efficacy and abstraction ability at the same time. Seeing the problems and theoretical studies, research was arranged to investigate the effect of inquiry-based worksheets on students' empirical abstraction abilities and self-efficacy.

METHOD

This research is a quantitative study with a quasi-experimental method of non-equivalent control group design type because one group was given treatment while the other group was not. This design is depicted in Table 1.

Table 1. Design of Nonequivalent control group

Class	*Pre test*	*Treatment*	*Post test*
Experiment	T_1	X	T_3
Control	T_2	-	T_4

This study took the population of all high school students of class XI SMA Negeri 1 Tawangsari TA 2020/2021. The sample of this study was 33 students of class XI MIPA 4 as the experimental class and 32 students of class XI MIPA 5 as the control class. The sample was selected using a non-random sampling technique with the type of incidental sampling because the sample was selected incidentally based on the same online learning time. The research instrument is an empirical abstraction ability test consisting of pretest and posttest and student self-efficacy questionnaires before and after treatment. This questionnaire was given with the help of the google form application.

This research procedure has 3 stages, the first stage is instrument validation, distributing self-efficacy questionnaires, and pretest. The results of the first stage obtained valid research instruments, pretest results, and initial data about self-efficacy. The pretest and self-efficacy data were tested for assumptions, namely normality and homogeneity with the help of SPSS. In the second stage, the researcher studied the limited material in which the experimental class was given LKS based on guided inquiry, and in the control class, conventional learning was carried out without LKS. In the third stage, namely the implementation of the posttest and the distribution of the final questionnaire. The results of stage 3 data are subjected to assumption tests (normality and homogeneity) and hypothesis testing of two different population averages with the help of SPSS.

RESULT AND DISCUSSION

The researcher will first provide an overview of the use of guided inquiry-based worksheets. Learning using guided inquiry worksheets in the experimental class went well, for four meetings. This LKS discusses the material for limiting functions for class XI MIPA where each LKS follows the steps of guided inquiry learning. The activity steps in each LKS include five stages, namely, orientation, exploration, concept formation, application, and closing. This step is in Hanson's opinion (Hanson, 2015).

The worksheet is identical to the problem so it is expected to facilitate the ability of empirical abstraction. The existence of instructions as guidance in the inquiry model will make students have self-confidence. At the orientation stage, students are given an explanation of the learning objectives to be achieved at each meeting. In the exploration stage, students are asked to investigate the given problem, as well as at the application stage. Figure 1. The following shows one of the stages in the guided inquiry worksheet, namely the exploration stage, where students are given initial problems to find the concept of the limit function.

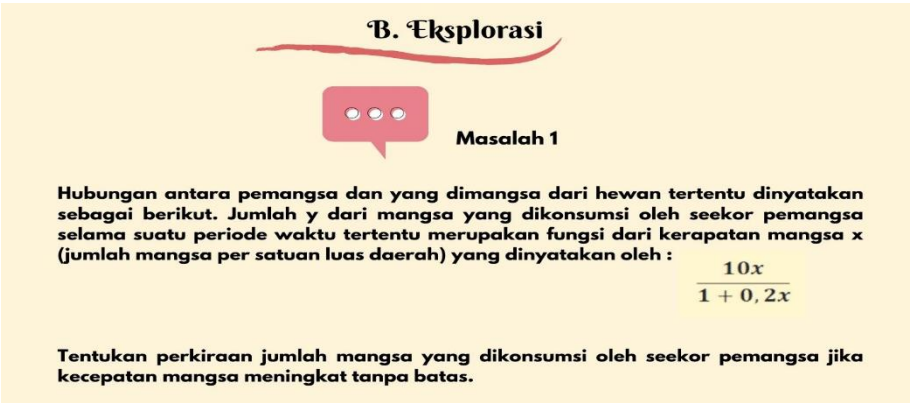

Figure 1. Example of a guided inquiry worksheet at the Exploration stage

The concept formation stage also begins with more specific problems as a form of guidance at the inquiry stage. At the application stage, students are asked to complete practice questions on the application of the limit concept that has been found through the next stage. Students are asked to conclude all learning activities at the closing stage. This is an overview of the implementation of learning using guided inquiry worksheets in the experimental class. Furthermore, the researcher will describe the results of the analysis in this study.

Analysis of Empirical Abstraction Ability

Pretest Data Analysis

The results of the pretest were subjected to an assumption test which included tests of normality and homogeneity. The results of the normality test can be seen in Table 2. below.

Table 2. Normality Test of Empirical Abstraction Ability Pretest

	N	Kolmogorov-Smirnov Z	Asymp. Sig.	Decision
Experimental class	31	0.880	0.420	Normal
Contol class	31	0.955	0.322	Normal

Based on Table 2, it is obtained that the value of Asym. Sig in both classes is greater than the 0.05 significance level. It can be concluded that the pretest data on the empirical abstraction ability of the experimental class and control class are normally distributed. The next assumption test is the homogeneity test which aims to determine whether the control class and experimental class test data have homogeneous variance with the help of SPSS. The results as shown in Table 3.

Table 3. Homogeneity Test Pretest Empirical Abstraction Ability

Levene Statistics	df1	df2	Sig.
0.052	1	60	0.821

Table 3 shows the value of Sig. the homogeneity test output is 0.081, so it can be concluded that the two experimental and control class variances are homogeneous.

Posttest Data Analysis

Experimental class students after carrying out learning using guided inquiry-based worksheets carried out a posttest to measure empirical abstraction abilities. In the control class, after the students had carried out the lesson, they were also asked to do the posttest. The results of this posttest were subjected to two analyzes, namely the assumption test and the homogeneity test. The results of the posttest normality test can be seen in Table 4, while the results of the homogeneity test can be seen in Table 5.

Table 4. Posttest Normality Test Empirical Abstraction Ability

	N	Kolmogorov-Smirnov Z	Asymp. Sig.	Decision
Experimental class	33	1.482	0.025	Not normally distributed
Control class	32	1.450	0.030	Not normally distributed

In table 4, the value of sig. the experimental class is 0.025 and the control class is 0.030. That is, the value is less than the level of sig. 0.05 so that it can be concluded that the posttest data on the empirical abstraction ability of the two classes are not normally distributed.

Table 5. Posttest Homogeneity Test Empirical Abstraction Ability

Levene Statistics	df1	df2	Sig.
2.852	1	63	0.096

Table 5 shows the output of the homogeneity test results. sig value. of 0.096 which means it is greater than 0.05 so it can be concluded that the posttest data of the empirical

abstraction ability of the two classes has a homogeneous variance. After testing the assumptions, the posttest data on empirical abstraction abilities were subjected to hypothesis testing. Because the data is not normally distributed but homogeneous, a hypothesis test of the mean difference between two independent non-parametric populations was carried out using the Mann-Whitney test technique.

The results of the assumption test show that the posttest data distribution of the empirical abstraction ability of the two classes is not normally distributed, but both classes have a homogeneous variance so that the Mann-Whitney test is used. To clarify the results, Table 6. follows the results of descriptive analysis and the results of hypothesis testing.

Table 6. Results of the Empirical Abstraction Ability Posttest

No.	Experimental Class	Control Class	Valid N (listwise)
N	33	32	32
Minimum	40.00	20.00	
Maximum	100.00	100.00	
Mean	85.0000	66.0938	
Std. Dev	16.15356	22.53978	
Mann-Whitney U	216.5000		
Wilcoxon W	744.500		
Z	-4.115		
Asymp. Sig. (2-tailed)	0.000		

Table 6 shows the value of Sig. 2-tailed 0.000 so for the value of Sig. (1-tailed) which is obtained by multiplying sig. (2-tailed) with 0.5 will get the same result that is less than 0.05. With this result, Ho is rejected, meaning that the average value of the empirical abstraction ability of the experimental class is higher than the control class. So it can be said that significantly the use of guided inquiry-based worksheets has a positive influence on the ability of empirical abstraction. The results of the descriptive analysis also show that there is an average difference where the average of the experimental class is higher than the control class.

The results of this study are by the results of previous research conducted by Dewi & Andriani that the use of student worksheets (LKS) can improve mathematical abstraction abilities (I. Dewi & Andriani, 2019). The use of worksheets is very effective for learning mathematics which aims to improve mathematical abstraction skills because students follow the activity steps contained in the worksheets.

The results of this study support the results of research conducted by Ratih Kusumawati & Prihadi Kurniawan who concluded that the development of teaching materials with guided discovery can effectively improve abstraction abilities(Kusumawati & Kurniawan, 2020). When viewed from the scenario in inquiry-based learning, learning activities begin with activities to formulate problems, develop hypotheses, collect evidence, test hypotheses, draw and test temporary conclusions and write conclusions(Fahyuni, 2016). The existence of opportunities for students to be involved in solving problems will overcome students' difficulties in carrying out the abstraction process (Nurhikmayati, 2017).

Self-Efficacy Analysis

The self-efficacy questionnaire was given twice, namely at the beginning before learning and at the end after learning. This happened in two classes, both the experimental class and the control class.

Preliminary Data Analysis

Data from the distribution of self-efficacy questionnaires before being subjected to assumption test analysis. The results of the assumption test in the form of normality and homogeneity test results can be seen in Table 7 and Table 8.

Table 7. Initial Self-efficacy Normality Test

	N	Kolmogorov-Smirnov Z	Asymp. Sig.	Decision
Experimental Class	33	0.506	0.960	Normal
Control Class	32	0.534	0.938	Normal

Based on Table 7. it is obtained that the value of Asym. Sig in the experimental class is 0.960 and the control class is 0.938. These results indicate that the value of Sig. in both classes is greater than 0.05 so it can be concluded that the initial self-efficacy data for the experimental class and the control class are normally distributed. The next assumption test is the homogeneity test which is carried out using Levene's test with the help of SPSS. The results of this homogeneity test can be seen in Table 8.

Table 8. Initial self-efficacy homogeneity test

Levene Statistics	df1	df2	Sig.
0.125	1	63	0.725

In Table 8, value of Sig. the homogeneity test output is 0.725, which means it is greater than the 0.05 significance level, so it can be concluded that both the experimental and control class variances are homogeneous. Descriptively, the homogeneity data can also be seen in Table 9. In Table 9. the initial average value has a not too much difference, the standard deviation is also not so different so this data strengthens the reason the two classes have homogeneous variations.

Table 9. Results of Initial Self-efficacy Description

No.	Experimental Class	Control Class	Valid N (listwise)
N	33	32	32
Minimum	38	37	
Maximum	64	64	
Mean	50.94	52.06	
Std. Dev	5.771	6.021	

Final Data Analysis

Students in the control and experimental classes were given a self-efficacy questionnaire at the end of the lesson. The data resulting from the questionnaire distribution is subjected to analysis of assumption testing and hypothesis testing.

The assumption test in question is the normality and homogeneity test. The results of the normality test and homogeneity test, respectively, can be seen in Table 10 and Table 11.

Table 10. Final Self-efficacy Normality Test

	N	Kolmogorov-Smirnov Z	Asymp. Sig.	Decision
Experimental class	33	0.698	0.715	Normal
Control class	32	0.512	0.956	Normal

Sig value. in both classes, both the experimental class and the control class is greater than 0.05 so it can be concluded that the distribution of the final self-efficacy data for the two classes is normally distributed.

Table 11. Final Self-efficacy Homogeneity Test

Levene Statistics	df1	df2	Sig.
1.309	1	63	0.257

Table 11 shows the output of the homogeneity test results. In the table, the value of sig. of 0.257 means that it is greater than 0.05 so data between the control class and the experimental class has a homogeneous variance.

Hypothesis testing aims to see whether the average self-efficacy of the experimental class is higher than the control class. The appropriate test analysis technique is the 1-tailed independent sample t-test. In addition to testing the hypothesis, the researcher also performed descriptive calculations to describe the characteristics of the data and strengthen the explanation. Hypothesis and descriptive test results can be seen in Table 12.

Table 12. Final Self-Efficacy Results

No.	Experimental Class	Control Class	Valid N (listwise)
N	33	32	32
Minimum	41	41	
Maximum	74	62	
Mean	56.66	50.94	
Std. dev	7.304	5.635	
t	3.632		
df	63		
Sig. (2-tailed)	0.001		

Table 12 shows the value of sig. (2-tailed) 0.001 so that the value of sig. (2-tailed) of 0.0005. Because 0.0005 is less than 0.005, the average final self-efficacy questionnaire for the experimental class is higher than the control class. The output results also show a calculated value of 3.632. When compared with the t table value at a significance level of 0.05, the t table is 1.668, meaning that the t-count value is greater than the t-table. So that the same conclusion can be obtained when using the sig. value, namely the experimental class has a higher average final self-efficacy than the control class. Seeing these results, it can be said that the use of guided inquiry-based worksheets has a significant positive effect on students' self-efficacy.

One of the principles of self-efficacy is that self-efficacy will develop based on previous student experiences(Bandura, 1977). The use of guided inquiry-based worksheets

provides students with experience in solving contextual problems that are easy for students to understand. Guided inquiry is an inquiry learning model in which the teacher provides fairly broad guidance or instructions to students (Sadiyyah et al., 2019). The habituation of inquiry learning steps accompanied by clear instructions on the LKS makes students' self-confidence increase as the results of this study.

CONCLUSION

Learning mathematics using guided inquiry-based worksheets was carried out well in the experimental class. The difference in treatment in the experimental class and the control class in the form of the use of guided inquiry-based worksheets has an impact on this study. The results showed that the average empirical abstraction ability of the experimental class students was higher than the control class. The results of hypothesis testing using Mann-Whitney concluded that significantly the use of guided inquiry-based worksheets had a positive effect on empirical abstraction abilities. Descriptively, the average self-efficacy score of the experimental class students was higher than the control class. The results of hypothesis testing using a t-test concluded that significantly the use of guided inquiry-based worksheets had a positive effect on students' self-efficacy.

REFERENCES

Abadi Prastowo, A. (2014). *Panduan Kreatif Membuat Bahan Ajar Inovatif*. Diva Press.

Annas, S., Djadir, & Hasma, S. M. (2018). The Abstraction Ability in Constructing Relation Within Triangles by the Seventh Grade Students of Junior High School. *Journal of Physics: Conference Series*, *954*(1). https://doi.org/10.1088/1742-6596/954/1/012029

Bandura, A. (1977). Self-Efficacy: Toward a Unifying Theory of Behavioral Change. In *Psychological Review* (pp. 191–215).

Darusman, C. (2008). *Efektifitas Penggunaan LKS dalam Melatih Kecakapan Berfikir Rasional Materi Perbandingan di SMP Negeri 1 Gelumbang*. Universitas Sriwijaya.

Dewi, D. R. (2010). *Implementasi Strategi Pembelajaran Practice Rehearsal Pairs Berbasis Portofolio Dalam Pembelajaran Matematika Untuk Mengembangkan Kemampuan Berfikir Kritis Siswa (PTK Kelas VII SMP Al Islam 1 Surakarta Tahun Ajaran 2009/2010)*. Universitas Muhammadiyah Surakarta.

Dewi, I., & Andriani, A. (2019). Pengembangan Lembar Kerja Siswa (LKS) berbasis Budaya Melayu untuk Meningkatkan Kemampuan Abstraksi Matematis. *Seminar Nasional Matematika Dan Pendidikan Matematika (4th SENATIK)*, 160–167.

Fahyuni, E. F. (2016). Developing Of Learning Tool at IPA Subject by Guided Inquiry Model to Improve Skills Science Process an Understanding Concepts SMPN 2 Porong. *Proceedings of International Research Clinic & Scientific Publications of Educational Technology, 1989*, 352–361.

Gray, E. M., & Tall, D. O. (2007). Abstraction As a Natural Process of Mental Compression. *Mathematics Education Research Journal*, *19*(2), 23–40. https://doi.org/10.1007/BF03217454

Hanson, D. M. (2015). *Designing Process-Oriented Guided-Inquiry Activities*. *January 2007*.

Ika, J., Sumarti, S. S., & Widodo, A. T. (2017). Penerapan Model Pembelajaran Inkuiri Terbimbing Terhadap Self Efficacy dan Hasil Belajar Kimia pada Materi Koloid. *Journal of Innovative Science Education*, *6*(1), 49–58.

Julyanasari, N., Praja, E. S., Noto, M. V., Sunan, U., & Djati, G. (2019). Problem Based

Learning Model on The Ability of Students Mathematical Connection. *PRISMA*, *8*(2), 167–172. https://doi.org/10.35194/jp.v8i2.400

Jumroh, Mulbasari, A. S., & Fitriasari, P. (2018). Self-Efficacy Siswa Dalam Pembelajaran Based Learning Di Kelas Vii Smp Palembang. *Jurnal Pendidikan Matematika RAFA*, *4*(1), 29–42.

Kandil, S., & Işıksal-Bostan, M. (2019). Effect of inquiry-based instruction enriched with origami activities on achievement, and self-efficacy in geometry. *International Journal of Mathematical Education in Science and Technology*, *50*(4), 557–576. https://doi.org/10.1080/0020739X.2018.1527407

Komala, E., & Sarmini, S. (2020). Kemampuan Representasi Simbolik Matematik Siswa SMP Menggunakan Blended Learning. *Prisma*, *9*(2), 204. https://doi.org/10.35194/jp.v9i2.1078

Kusumawati, R., & Kurniawan, P. (2020). Pengembangan Bahan Ajar Stuktur Aljabar dengan Penemuan Terbimbing untuk Meningkatkan Kemampuan Abstraksi dan Menulis Bukti Matematika. *Journal of Medives : Journal of Mathematics Education IKIP Veteran Semarang*, *4*(1), 197. https://doi.org/10.31331/medivesveteran.v4i1.1010

Ningrum, P., & Rahmawati, R. D. (2021). Pengaruh Self Efficacy Terhadap Prestasi Belajar Matematika Siswa Sd Dalam Pembelajaran Daring. *Prima Magistra: Jurnal Ilmiah Kependidikan*, *3*(1), 41–47. https://doi.org/10.37478/jpm.v3i1.1394

Nurhikmayati, I. (2017). Kesulitan Berpikir Abstrak Matematika Siswa Dalam Pembelajaran Problem Posing Berkelompok. *KALAMATIKA Jurnal Pendidikan Matematika*, *2*(2), 159. https://doi.org/10.22236/kalamatika.vol2no2.2017pp159-176

Pardimin, P. (2018). Self-Efficacy Matematika Dan Self-Efficacy Mengajar Matematika Guru Matematika. *Jurnal Ilmu Pendidikan*, *24*(1), 29. https://doi.org/10.17977/um048v24i1p29-37

Pawuri, M. F. Y. (2013). *Efektivitas Penggunaan Metode Inkuiri Terbimbing Pada Pokok Bahasan Prisma dan Limas Terhadap Hasil Belajar, Keaktifan dan Kemampuan Berpikir Kritis Siswa Kelas VIII Smp Theresiana Jambu, Kabupaten Semarang Tahun Ajaran 2012/2013*. Universitas Sanata Dharma.

Rahmawati, N. I. (2018). Pemanfaatan ICT dalam Meningkatkan Kemampuan Literasi Matematika. *PRISMA*, *1*, 381–387.

Rohmah, W. N., Septian, A., & Inayah, S. (2020). Analisis Kemampuan Penalaran Matematis Materi Bangun Ruang Ditinjau Gaya Kognitif Siswa Menengah Pertama. *PRISMA*. https://doi.org/10.35194/jp.v9i2.1043

Sadiyyah, R., Gustiana, M., Panuluh, S. D., & Sugiarni, R. (2019). Pengembangan Lembar Kerja Siswa (Lks) Dengan Pendekatan Inkuiri Terbimbing Berbasis Mobile Learning Untuk Mengoptimalkan Kemampuan Berpikir Kritis Matematis. *Prisma*, *8*(1), 80. https://doi.org/10.35194/jp.v8i1.616

Sanjaya, W. (2006). *Strategi Pembelajaran*. Kencana Prenada Media Group.

Septian, A., & Gustiana, M. (2022). Pengembangan Lembar Kerja Siswa pada Materi Sistem Persamaan Linear Dua Variabel Berbasis E-Learning. *UNION : Jurnal Ilmiah Pendidikan Matematika*, *10*(1), 81–92.

Septian, A., & Maghfirah, D. (2021). Mathematical Literacy Skills using Google Classroom on Trigonometry. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, *10*(4), 2515–2525. https://doi.org/10.24127/ajpm.v10i4.4263

Septian, A., Muhammad, G. M., & Rahmah, I. Z. (2022). Kemampuan Literasi Matematis Siswa Melalui Model Learning Cycle Berbantuan Google Classroom. *Jurnal Padegogik*, *5*(1), 1–10. https://doi.org/https://doi.org/10.35974/jpd.v5i1.2634

Sulistiyo, M. A. S., & Wijaya, A. (2020). The Effectiveness of Inquiry-Based Learning on Computational Thinking Skills and Self-Efficacy of High School Students. *Journal of*

Physics: Conference Series, *1581*(1). https://doi.org/10.1088/1742-6596/1581/1/012046

Suryawan, I. P. P., & Permana, D. (2020). Media Pembelajaran Online Berbasis Geogebra sebagai Upaya Meningkatkan Pemahaman Konsep Matematika. *Prisma*, *9*(1), 108. https://doi.org/10.35194/jp.v9i1.929

Suweken, G. (2021). *Vektor Sebagai Konten Pembelajaran Daring Pada Kelas X Di SMA Negeri 1 Blahbatuh The Development of Interactive Dynamic Student ' Worksheets on Vector Material as Online Learning Content in Class X SMA Negeri*. *XI*, 356–365.

Tsany, U. N., Septian, A., & Komala, E. (2020). The Ability of Understanding Mathematical Concept and Self-Regulated Learning using Macromedia Flash Professional 8. *Journal of Physics : Conference Series*, *1657*(1), 012074. https://doi.org/10.1088/1742-6596/1657/1/012074

Yunita, A. E. (2017). *Meningkatkan Kemampuan Abstraksi Matematis Siswa dengan Menerapkan Pembelajaran Blended Learning Berbasis Chamilo: Penelitian Kuasi Eksperimen terhadap Siswa Kelas XI IPA 1 SMA Al-Ma'soem*. UIN Sunan Gunung Djati Bandung.