

THE EFFECT OF MULTIPLE INTELLIGENCE-BASED GUIDED INQUIRY LEARNING ON SOCIAL SKILLS OF ELEMENTARY SCHOOL STUDENTS

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Abstract

This study aims at determining the effect of guided inquiry model based on multiple intelligence toward the social skills of elementary school students at Pasuruhan 1 State Elementary School, Mertoyudan District, Magelang Regency in Social Science learning of fourth grade. This research belongs to a Quasi-Experimental Design research with the Non-equivalent Control Group Design model. Research subjects were selected by Non-probability Sampling with saturation sampling model. The samples were 30 students consisting of 15 students in the experimental group and 15 students in the control group. The data collection methods were done by using a questionnaire and observation of social skills. The validity test of social skills questionnaire was done by using the product moment formula while the reliability test was done by using Cronbach Alpha formula with the help of the SPSS for windows version 25 program. Data analysis used in this research is a non-parametric statistical technique, namely the Mann-Whitney. The result of this study indicates that there is an effect of guided learning based on multiple intelligences on the social skills of elementary school students. This is proved by the results of the Mann-Whitney test analysis which shows Asymp value. Sig. (2-tailed) of $0.003 < 0.05$. By this result, it can be concluded that the hypothesis is accepted. Therefore, it can be said that there is social skills difference of the experimental class and the control class students. It is proved by a significant difference thus it shows that guided inquiry learning has a positive effect on student's social skills.

Keywords: guided inquiry, multiple intelligence, social skills

INTRODUCTION

The importance of developing social skills is indicated by a learning which runs well and smoothly if the communication and interaction are also built properly. However, the reality that often occurs during the learning process is the existence of less active and lack confidence students. There are frequent clashes that occur in Magelang as the news of students brawl on Friday, January 2nd 2019 which started with mocking each other on social media. The brawl caused the death of Ma'arif Vocational High School student, Nasrul Aziz (17). He was hit and stabbed by a sharp weapon (Suswanto, 2019). Another incident also occurred in Magelang, the stabbing of a student on Salaman-

Purworejo street on Wednesday, January 15th 2020. The victim suffered injuries to his back and thighs. The victim was rushed to Tidar Hospital, Magelang City (Mardiyanto, 2020). Another case also occurred in early 2020, a brawl between elementary school students in the Sukabumi area, West Java. This case occurred on Friday, February 21st 2010 which was caused by a misunderstanding between students. In this case, students brought weapons such as iron rulers, sickles, and wood. Fortunately, the brawl was immediately dispersed by local residents and there was no casualties (Budiyanto, 2020). Such cases have happened a lot in the school environment. One of the many cases that occur in the

school environment is the loss of 5S (*sopan, santun, salam, sapa, senyum*) or the habits of being polite, conveying greeting, and smiling to students. This phenomenon shows the importance of social skills for each individual, especially for a student to use it in everyday life. Therefore, students must be familiarized with social skills thus they can be accepted by anyone and anywhere. The current pandemic condition also greatly affects the level of children's social skills. In addition, schools are closed and the learning process is carried out online. This causes children to rarely engage in social activities such as discussing, collaborating, and playing together. Consequently, the skills of children to respect and help each other are very low. Based on observations and interviews at Pasuruan 1 Elementary School, social skills problems were obtained. In learning process, the class is still dominated by the teacher. This means that the teachers still play a more active role than the students. While in the 2013 curriculum, students are required to be more active and the teacher since the teacher is only a facilitator. Some of the problems found in this study are (1) students' social skills are still low, (2) teachers use less innovative learning models which makes students difficult to comprehend the learning material presented, (3) the method used by the teacher is still using the lecture method which causes students bored, and (4) teaching materials used during learning are only limited to textbooks and workbooks.

The problems above have not been follow-up from by the teacher. There is no effort by the teacher to handle it at school thus so students feel unable to do something according to what they are and are not accepted in the learning environment. Students think that what they do will be in vain. Low social skills can be bad for students' mentality. Previously, various efforts have been made by the school such as (1) giving motivation by the teachers to the students, 2) a learning involving natural

environment, and 3) providing good school facilities to support learning process. Based on these efforts the students' social skills are still not optimal for several facts including as follow. (1) The teachers do not understand characteristics of the students. Each student has different characteristics thus their intelligence is also different. Therefore, the teachers should understand the characteristics and intelligence possessed by students so they can easily comprehend learning materials. (2) Lessons are carried out in groups causing the competitive spirit of students will be higher than collaborating. This is indicated by the difficulty of students to cooperate in the learning process.

Based on the problems above, the researchers provide a solution, namely the application of guided inquiry learning based on multiple intelligences to overcome the problem of social skills of the students. Indrawati stated that learning is said to be more effective if the teacher applies learning models that are included in the processing of information to students which means the learning model emphasizes how students think and its impact on how to process the information (Sukmawati, A. & Sukadasih, 2014). One of the learning models that can process information is the guided inquiry model. Guided inquiry learning is learning which involves students to be active in conducting investigations and using information sharing to increase students understanding. The guided inquiry model can help students no longer be in the scope of *telling doing* learning, but they are encouraged to *doing science* learning (Sari, A.A.; Hadisaputro, S.; & Nurhayati, 2017). Learning which can activate students needs to be accompanied by a multiple intelligence-based approach. This learning provides a learning experience that has been designed with the needs, cognitive style of students, and according to the type of intelligence of each student (Setiawati, 2019). Rizal and Wasis argued that if multiple intelligences are developed and involved in the learning

process, it would increase the effectiveness and learning outcomes (Kurniawan, dkk., 2017; Lockman, A. S., & Schirmer, B. R. 2020; Silalahi, T. F., & Hutauruk, A. F. 2020).

The advantage of this learning is to increase students' active participation in learning process. This learning needs to be applied since it can freely develop the concepts found thus the teachers do not only transfer their knowledge and students do not only write and re-memorize the material presented by the teacher. Moreover, this learning provides an opportunity to include brainstorming in solving existing problems according to the type of intelligence possessed by each student. Researchers hope the application of guided inquiry based on multiple intelligences through social studies learning can foster social skills of the students.

METHOD

This study uses a quantitative approach with a quasi experimental design research

Table 1. Multiple Intelligence Research Analysis Results

Intelligence Type	Score	Percentage	Student Amount
Visual-Spatial	396	12,20%	-
Logic - Mathematic	290	8.93%	2
Kinesthetic	418	12.88%	-
Naturalist	395	12,17 %	-
Musical	367	11,31%	4
Interpersonal	584	17.99%	18
Intrapersonal	392	12.08%	2
Linguistic	404	12,44%	-
Total	3246	100%	28

Based on table 11 above, it can be seen that 2 students are dominant in mathematical logic intelligence, 4 students are dominant in musical intelligence, 18 students are dominant in interpersonal intelligence, and 2 students are dominant in intrapersonal intelligence. Meanwhile, the visual-spatial, naturalist, kinesthetic, and linguistic intelligences are not dominated by students. So it can be

method and a non-equivalent control group design model. The samples used in this study were fourth grade elementary school students at Pasuruan 1 State Elementary School, Mertoyudan, Magelang. There are 30 students consisting of two classes, namely classes IVA and IVB with 15 students each. The research technique used is a questionnaire and observations which made on the indicators of the social skills questionnaire. In this study, the validity test was carried out by using the help of a computer program, namely SPSS 25 for Windows with the product moment correlation from Karl Pearson while the hypothesis test uses the Mann-Whitney test.

RESULTS AND DISCUSSION

a. MIR (Multiple Intelligence Research) Analysis Results

The MIR analysis in this study was carried out with 28 students as the subjects, both the control class and the experimental class. The results of the MIR analysis can be seen in Table 1.

concluded that each student has a different type of intelligence.

b. Questionnaire Data Results

The results of the questionnaire data in this study were known through the results of the pretest and posttest that had been given to the experimental class and control class. The result of questionnaire data is presented in the following Table 2.

Table 2. Experimental Class Pretest and Posttest Questionnaire Data

Interval	Category	Experiment Class	
		<i>Pretest</i>	<i>Posttest</i>
29 – 51	Poor	-	-
52 – 74	Sufficient	3	-
75 – 97	Good	10	7
98 – 120	Excellent	2	8
	The Lowest Score	52	86
	The Highest Score	106	109
	Average	80,27	98

Based on table 2, it can be seen that the 15 students of experimental class obtain different pre-test and post-test results. The results of the pretest show that the lowest score is 52 and the highest score is 106 with 3 students are in the sufficient category, 10 students are in the good category and 2 students are in the excellent category. The average pretest obtained is 80.27 with good category. While the posttest results show that there is an increase in grades with the lowest score being

86 and the highest score being 109 with none of the students is in the poor or sufficient category, 7 students are in the good category, and 8 students are in the excellent category. The average obtained is 98 with excellent category. Meanwhile, in the control class it is obtained different pre-test and post-test result compared by the experiment class. The pre-test and post-test results of control class are presented in the following Table 3.

Table 3. Control Class Pretest and Posttest Questionnaire Data

Interval	Category	Control Class	
		<i>Pre-test</i>	<i>Post-test</i>
29 – 51	Poor	-	-
52 – 74	Sufficient	3	-
75 – 97	Good	11	13
98 – 120	Excellent	1	2
	The Lowest Score	55	79
	The Highest Score	104	105
	Average	81,33	89

Based on Table 3 above, it can be seen that the 15 students of control class obtain different pre-test and post-test results although the increase is slightly significant. The results of the pre-test show that the lowest score is 55 and the highest score is 104 with 3 students are in the sufficient category, 11 students are in the good category, and 1 student is in the excellent category. The average of pre-test

obtained is 81.33 with good category. While the post-test results show that the score with the lowest score is 79 and the highest score is 105 with 2 students are in the very good category, 13 are in the good category, and none of the students is in the less or enough category. The average obtained is 89 with good category. The details can be seen in Figure 1 below

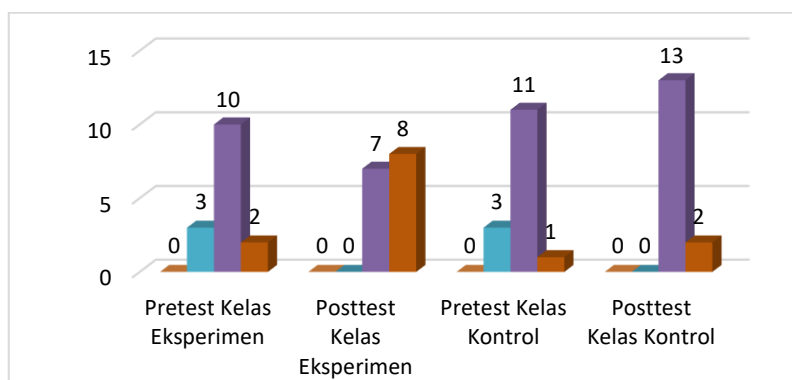


Figure 1. Pretest and Posttest Questionnaire Data for Experiment Class and Control Class

c. Observation

The data on students' social skills are not only obtained from the results of the questionnaire, but also it is obtained from the observations

made by the researchers during the implementation of the research. The following table presents the results of social skills observation of the experimental class students.

Table 4. Experimental Class Social Skills Observation Data

Interval	Category	Experiment Class	
		<i>Pretest</i>	<i>Posttest</i>
98 – 120	A (excellent social skills)	-	5
75 – 97	B (good social skills)	3	8
52 – 74	C (sufficient social skills)	1	2
29 – 51	D (poor social skills)	1	-
	The Lowest Score	50	66
	The Highest Score	84	106
	Average	69,47	90,73

Based on Table 4, the initial data and final data are obtained from the observation of students' social skills in the experimental class. The lowest score in the initial data is 50 and the highest score is 84 with an average of 69.47 in the category of low social

skills. While the lowest score of the final data is 66 and the highest score is 106 with an average in the high category. Therefore, there is an increase in students' skills of the experimental class from initial to final observation.

Table 5. Control Class Social Skills Observation Data

Interval	Category	Control Class	
		<i>Pre-test</i>	<i>Post-test</i>
98 – 120	A (excellent social skills)	-	-
75 – 97	B (good social skills)	3	10
52 – 74	C (sufficient social skills)	10	5
29 – 51	D (poor social skills)	2	-
	The Lowest Score	45	7
	The Highest Score	83	91
	Average	66,67	80,93

Based on table 5, the initial data and final data are obtained from the observation of students' social skills in the control class. The lowest score in the initial data is 45 and the highest score is 83 with an average of 66.67 in the low category. While the lowest score of the final data is 67 and the

highest score is 91 with an average of 80.93 in the medium category. That is, there is no slightly significant increase in the skills of the control class students from the initial to the final observation. The details can be seen in Figure 2 below.

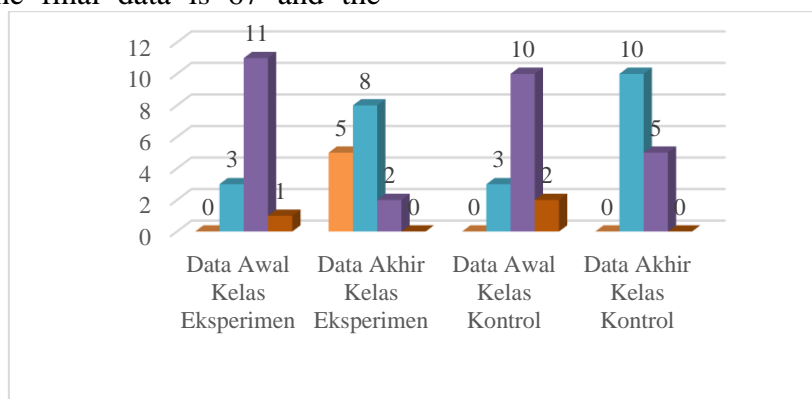


Figure 2 Social Skills Observation Data for Experiment Class and Control Class

d. *Mann-Whitney Test*

This research belongs to a non-parametric research. It is caused by the data obtained have met the assumptions of non-parametric statistical data. Data analysis in this study is the Mann-Whitney test. The Mann-Whitney test was carried out because the research design used a quasi experimental design and the sampling technique was non-

random, namely saturation sampling. This analysis aims at determining the difference of scores between the experimental class and the control class. This analysis was carried out with the help of the SPSS for windows version 25 computer program. The results of the Mann-Whitney test can be seen in the following Table 8.

Table 6. Mann-Whitney Test Results Social Skills Questionnaire

	Results
<i>Mann-Whitney U</i>	41.000
<i>Wilcoxon W</i>	162.000
<i>Z</i>	-2.969
<i>Asymp. Sig. (2-tailed)</i>	.003
<i>Exact Sig. [2*(1-tailed Sig.)]</i>	.002 ^b

Based on Table 8 above, it is known that the Asymp value. Sig. (2-tailed) of $0.003 < 0.05$. Therefore, it can be concluded that the hypothesis is accepted. Thus, it can be said that there are differences in the students' social skills of the experimental class and the control class. Since there is significant

difference, it can be said that there is an effect of guided inquiry learning based on multiple intelligences on students' social skills.

This study aims at determining the effect of guided inquiry learning based on multiple intelligences on the social skills of fourth grade elementary school students.

This research is focused on Social Science subject, Theme 7 (The Beauty of Diversity in My Country), Sub-theme 1 (Ethnic and Religious Diversity in My Country). The learning is carried out by using a guided inquiry model combining 3 intelligence strategies, namely logic-mathematical, musical, and interpersonal strategies. While the skills referred to in the study include the ability to communicate, establish cooperation, and respect others.

One of the subjects that can be related to social skills is Social Science as it contains a lot of material that can develop students' social skills. Meanwhile, to support it, an appropriate learning model with students' intelligence is needed. One of them is a guided inquiry model that is associated with intelligence strategies. This learning makes students easier to comprehend material provided. Meanwhile, guided inquiry learning related to social skills is expected to improve the social skills of each student thus it is easily accepted by anyone and anywhere. Moreover, the students are able to solve existing problems (Sparapani, N., Connor, C. M., McLean, L., Wood, T., Toste, J., & Day, S. 2018; Stender, A., Schwichow, M., Zimmerman, C., & Härtig, H. 2018; Margunayasa, I. G., Dantes, N., Marhaeni, A. A. I. N., & Suastra, I. W. 2019).

Based on results of this study, it can be seen that there is a difference between the experimental class and the control class. Both classes experience an increase. The average result of the pretest questionnaire for the experimental class is 80.27 and the control class is 81.33 which have a difference of 1.06. The average posttest questionnaire results for the experimental class is 98 and the control class is 89. These scores have a difference of 9. While the average results of the initial observation data for the experimental class are 69.47 and the control class 66.67. These scores have a difference of 2.8. Meanwhile, the average result of the final observation data for the experimental class is 90.73 and the

control class is 80.93. These scores have a difference of 9.8.

Based on results of this study, it can also be seen that the application of the guided inquiry learning model based on multiple intelligence affects the social skills of fourth grade students at Pasuruan 1 Elementary School. There is a difference in students' social skills between the experimental class and the control class as evidenced by the results of questionnaire data analysis that has been tested by using the Mann-Whitney test. The result shows the Asymp value. Sig. (2-tailed) of $0.003 < 0.05$. Therefore, it can be concluded that the hypothesis is accepted. Therefore, it can be said that there are differences in the students' social skills of the experimental class and the control class. Since it shows a significant difference, it can be said that there is an effect of guided inquiry learning based on multiple intelligences on students' social skills. This study found that students were more enthusiastic about learning, especially in groups, thus the students' social skills can increase. This improvement can be seen from the increase of students' concern with friends (as lending friends money when they did not bring money pocket and sharing food with other friends), there was no bullying between the students, responsible attitude with group assignments, and the interaction between students is getting better.

This research is supported by a research conducted by Khulatul Lutfiah entitled *The Influence of Guided Inquiry Learning on Thinking and Social Skills of Madrasah Ibtidaiyah Students*. Based on the data analysis and discussion, the results obtained are the application of the inquiry learning model in social studies subjects affects thinking and social skills, so that it has increased. This is evidenced by students that being more motivated and enthusiastic in working on group discussion tasks (Lutfiah, 2016; Apavlasopoulou, S., Giannakos, M. N., & Jaccheri, L. 2019; T., Tsai, C. C., & Chang, H. Y. 2021). Based on the results of the study, it can be

concluded that there is an effect of guided inquiry learning based on multiple intelligences in Social Science subjects on the social skills of fourth grade students at Pasuruan 1 State Elementary School, Mertoyudan. Therefore, the students' social skills are increased

CONCLUSION

Based on the results of this study, it can be seen that the application of the guided inquiry learning model based on multiple intelligence has an effect on the social skills of fourth grade students at Negeri Pasuruan 1 State Elementary School. An increase in students' social skills is evidenced by the results of questionnaire data analysis which has been tested by using Mann-Whitney test. The result shows the Asymp value. Sig. (2-tailed) of $0.003 < 0.05$. Therefore, it can be concluded that the hypothesis is accepted. Thus, it can be said that there are differences in the students' social skills of the experimental class and the control class. Since there is a significant difference, it can be said that there is an effect of guided inquiry learning based on multiple intelligences on students' social skills.

Factors supporting the treatment successes include: (1) teacher factors, where teachers are able to apply learning models and strategies which match the character and intelligence of the students, as well as linking them with the students' social skills which will improve students' social skills; (2) student factors, where the students have good relationships and motivate themselves to grow and develop well thus the students interactions will increase; (3) environmental factors, where the environment is good (family, school, and community), then the level of social skills of the children will increase.

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