THE EFFECTIVENESS OF THE SUSAN LOUCKS-HORSLEY MODEL AND THE SMALL GROUP DISCUSSION METHOD ON COLLABORATION SKILL

Siti Maisarotul Jahro[1], Retno Widyaningrum[2]
IAIN Ponorogo, Jl. Pramuka No. 156, Ronowijayan, Kecamatan Siman, Kabupaten Ponorogo
Email: maeysa28@gmail.com, retno.widya@iainponorogo.ac.id

Abstract

Collaboration skills are one of the 21st century skills that must be possessed by students. This skill is identical to the ability of students to work together to solve something together. The low ability of collaboration will affect the social life of students both in the school environment, community, and work environment. Therefore, an educational effort is needed to train collaboration skills in students. This study aims to 1) determine the implementation of learning, 2) student activities, and 3) the effectiveness of the SLH model and the SGD method in improving students' collaboration skills. The research was carried out at MTsN 1 Ponorogo in class VII students. The research method used is quantitative with experimental type. Data obtained through observation sheets. Based on the research, it can be seen that 1) the implementation of learning and student activities during learning using the SLH model and the SGD method are in the very good category. 2) Based on the analysis of the T test (Two Tailed) using SPSS obtained a P-value of 0.000. So it can be concluded that the SLH model and the SGD method have an effect on students' collaboration abilities. The results of the n-Gain score test showed an average value of 59.07% in the experimental class. These results indicate that the use of the SLH model with the SGD method is quite effective in improving the collaboration skills of class VII students at MTsN 1 Ponorogo.

Keyword: *Collaboration Ability, Susan Loucks-Horsley (SLH) Model, Small Group Discussion (SGD) Method*

Abstrak

Keterampilan kolaborasi merupakan salah satu keterampilan abad 21 yang harus dimiliki oleh siswa. Keterampilan ini identik dengan kemampuan siswa bekerja sama untuk memecahkan suatu hal secara bersama-sama. Rendahnya kemampuan kolaborasi akan mempengaruhi kehidupan sosial siswa baik di lingkungan sekolah, masyarakat, maupun lingkungan kerja. Oleh karena itu, diperlukan suatu upaya pendidikan untuk melatih keterampilan kolaborasi pada siswa. Penelitian ini bertujuan untuk 1) mengetahui pelaksanaan pembelajaran, 2) aktivitas siswa, dan 3) keefektifan model SLH dan metode SGD dalam meningkatkan keterampilan kolaborasi siswa. Penelitian ini dilaksanakan di MTsN 1 Ponorogo pada siswa kelas VII. Metode penelitian yang digunakan adalah kuantitatif dengan tipe eksperimen. Data diperoleh melalui lembar observasi. Berdasarkan penelitian dapat diketahui bahwa 1) keterlaksanaan pembelajaran dan aktivitas siswa selama pembelajaran menggunakan model SLH dan metode SGD berada pada kategori sangat baik. 2) Berdasarkan analisis uji T (Two Tailed) dengan menggunakan SPSS diperoleh nilai P-value sebesar 0,000. Sehingga dapat disimpulkan bahwa model SLH dan metode SGD berpengaruh terhadap kemampuan kolaborasi

siswa. Hasil uji skor n-Gain menunjukkan nilai rata-rata 59,07% pada kelas eksperimen. Hasil tersebut menunjukkan bahwa penggunaan model SLH dengan metode SGD cukup efektif dalam meningkatkan keterampilan kolaborasi siswa kelas VII MTsN 1 Ponorogo.

Kata Kunci*: Kemampuan Kolaborasi, Model Susan Loucks-Horsley (SLH), Metode Small Group Discussion (SGD)*

Introduction

21st century education can be said to be an effort to fulfill 21st century skills in the world of education. One of the 21st century skills that students urgently have as a provision in the world of work is collaboration skills. Janssen and Wubbels define collaboration skills as the ability to foster relationships with others by participating in an activity that upholds mutual respect and prioritizes teamwork so that common goals can be achieved properly.[1] Suarez-Orozco & Sattin claims that collaboration skills are key skills for success in the 21st century.[2]

As one of the skills of the 21st century, collaboration skills are useful as a provision in facing the era of globalization, especially in the world of work. This skill makes it easier for a person to socialize, have control of ego and emotions, and have a good sensitivity to the surrounding environment. So that a person will be easier to carry out his life in the world of work. Research shows that collaboration skills have a positive impact on a person's performance. A person who has good collaboration skills is able to organize and share positive energy within the group. In addition, it is also able to facilitate others in work, see opportunities in others and take advantage of them in the right direction.[3]

Collaborating in a group will make a person have their own role, help and influence each other, and have rules that support common interests.[4] The use of collaboration skills in the learning process, among others, can make it easier for students to build social interaction, understand learning, improve problem-solving skills and learning achievements.[5] Learners can also practice creativity, social competence, make plans, make decisions and goals, and build a positive group learning environment.[6] Hill mentioned several benefits of collaboration skills in learning such as being able to create a pleasant learning climate,

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[1] Ayu Rahmawati, Noor Fadiawati, and Chansyanah Diawati, "Analisis Keterampilan Berkolaborasi Siswa SMA Pada Pembelajaran Berbasis Proyek Daur Ulang Minyak Jelantah," *Jurnal Pendidikan Dan Pembelajaran Kimia* 8, no. 2 (2019): 1–15.

[2] Kathleen Ofstedal and Kathryn Dahlberg, "Collaboration in Student Teaching: Introducing the Collaboration Self-Assessment Tool," *Journal of Early Childhood Teacher Education* 30, no. 1 (2009): 37–48, https://doi.org/10.1080/10901020802668043.

[3] Rahmawati, Fadiawati, and Diawati, "Analisis Keterampilan Berkolaborasi Siswa SMA Pada Pembelajaran Berbasis Proyek Daur Ulang Minyak Jelantah."

[4] Hidayati, "*Collaboration Skill of Biology Students at Universitas Islam* Riau, Indonesia."

[5] Setyaningsih, "Peningkatan Keterampilan Komunikasi dan Kolaborasi dengan Menggunakan Model Pembelajaran Kooperatif Tipe *Group Investigation* Materi IPA pada Siswa Kelas V SD Kanisius Jomegatan."

[6] Hidayati, "*Collaboration Skill Of Biology Students At Universitas* Islam Riau, Indonesia."

fostering the leadership spirit of learners, practicing cooperation and respecting mutual agreement in groups.

However, today the importance of collaboration skills is not in line with the reality that exists in the world of education. Based on an interview with one of the science teachers at MTsN 1 Ponorogo, the collaboration skills of students are still not optimal. Learners tend to be less active in group activities. Whether in expressing arguments, ideas, or suggestions. In addition, learners also depend on their duties and responsibilities to others in the group. The lack of teamwork that is built up also makes it impossible to achieve collaboration skills in students.

Therefore, an effort is needed in education to foster collaboration skills in students. One of the steps that can be taken is to present a cooperative learning.[7] This can be achieved through the use of learning models or methods that support collaboration skills. One of them is the Susan Loucks-Horsley (SLH) model and the Small Group Discussion (SGD) method.

The SLH model is a learning model developed by Susan Loucks-Horsley based on the theory of constructivism learning. The use of the SLH model in learning is able to facilitate students to find knowledge and understanding independently, provide opportunities for students to engage in hands on activities, and be able to support the five taxonomic domains in science education.[8] In addition, SLH learning also helps learners understand the concepts of science and technology in an integrated manner.[9]

The SLH model has four learning syntaxes, namely invited; explore discover, create; propose explanation and solution; and taking action.[10] Muiz in his research (2016) states that each stage of learning in the Susan Loucks-Horsley model involves collaborative processes such as positive interdependence in groups, interacting, working together, respecting each other and having a sense of responsibility.[11] The SLH model also trains learners to think critically, improve their science process skills and concern for the environment, as well as higher-order thinking skills.[12] So that this model can be used as an alternative in fostering collaboration skills.

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[7] Farida Nova Kurniawati, Susanto Susanto, and Ahmad Munir, "Promoting Students' Collaboration Skill Through Project Based Learning of English Writing," *Jurnal Ilmiah Program Studi Pendidikan Bahasa Inggris* 10, no. 1 (2019): 29–42, https://doi.org/10.33373/anglo.v10i1.1890.

[8] E sti Yuli Widayanti, "Pendekatan Konstruktivistik dalam Model Susan Loucks-Horsley untuk Pengembangan Karakter Siswa Tingkat Sekolah Dasar," *Seminar Nasional Pendidikan 2015*, no. November (2019): 752–61, http://seminar.umpo.ac.id/index.php/semnasdik2015/article/download/295/295.

[9] (Prayoga, 2019)

[10] Ana Yuniasti Retno Wulandari and Nurhayati Nurhayati, "The Relationship Between Verbal Ability and Critical Thinking Skill: The Implementation of Susan Loucks

[11] Abdul Muiz et al., "Implementasi Model Susan Loucks-Horsley terhadap Communication and Collaboration Peserta Didik SMP," *Unnes Science Education Journal* 5, no. 1 (2016): 1079–84, https://doi.org/10.15294/usej.v5i1.9565.

[12] Wulandari and Nurhayati, "The Relationship Between Verbal Ability and Critical Thinking Skill: The Implementation of Susan Loucks Horsley Model."

In addition to the Susan Loucks-Horsley model, the use of the Small Group Discussion (SGD) method can also be used as an alternative in supporting collaboration skills. The Small Group Discussion (SGD) method or small group discussion is the activity of talking about a problem and aligning opinions between two or more people.[13] Hasibun and Moedjiono stated that what is meant by the small group discussion method is the process of face-to-face interaction between two or more people about a goal through the activity of exchanging opinions, information, and solving problems together.[14] Mulyasa said that the SGD method is a branch of the discussion method whose membership does not consist of many people so that it is more effective because students will be more free to communicate directly.[15]

SGD focuses on individual learning by sharing learning experiences between its members and working together in groups. This is intended to explore the ability of students in learning so that active and pleasant learning conditions will be created. The small group discussion method is designed as a forum for students to argue, communicate, work together, make decisions, and solve problems in groups. In addition, according to Oemar Hamalik, the implementation of this method is intended so that students can independently find direct learning experiences, train critical thinking, foster harmony and group cooperation, create kinship, and train in deliberation and achieve consensus in groups.[16]

Based on the description above, the purpose of this study is to determine the influence and effectiveness of the Loucks-Horsley (SLH) model with the Small Group Discussion (SGD) method in improving student collaboration skills. In addition, it is also to find out the implementation of learning and student activities during learning using the SLH model and the SGD method on natural science materials.

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[13] Utami Soifah, "Metode *Small Group Discussion* untuk Meningkatkan Kompetensi Membaca Teks Hortatory Exposition," *Jurnal Penelitian Dan Kajian Pendidikan Islam* 3, no. 2 (2018): 137–53, https://doi.org/10.47736/tajdidukasi.v8i2.284.

[14] Niken Fathia Saraswati, "Implementasi Metode Pembelajaran Small Group Discussion untuk Meningkatkan Aktivitas Belajar Pada Kompetensi Dasar Jurnal Penyesuaian Siswa Kelas X Akuntansi Smk Muhammadiyah Kretek Tahun Ajaran 2017/2018," *Skripsi* Universita, no. Fakultas Ekonomi (2018): 1–114, http://dx.doi.org/10.1016/j.neuropsychologia.2015.07.010%0Ahttp://dx.doi.org/10.1016/j.visres.2014.07.001%0Ahttps://doi.org/10.1016/j.humov.2018.08.006%0Ahttp://www.ncbi.nlm.nih.gov/pubmed/24582474%0Ahttps://doi.org/10.1016/j.gaitpost.2018.12.007%0Ahttps:

[15] A. Christiani and Mintohari, "Penerapan Metode Small Group Discussion dengan Model Cooperative Learning untuk Meningkatkan Hasil Belajar Siswa Sekolah Dasar," *Jurnal Penilitian Pendidikan Guru Sekolah Dasar* 2, no. 2 (2014): 1–11, https://media.neliti.com.

[16] Sofyan Susanto, "Efektifitas *Small Group Discussion* dengan Model Problem Based Learning dalam Pembelajaran di Masa Pandemi Covid-19," *Jurnal Pendidikan Modern* 6, no. 1 (2020): 55–60, https://doi.org/10.37471/jpm.v6i1.125.

Method

This research uses a quantitative approach with an experimental type of research. The research design used is a nonequivalent pretest-posttest control group design. The research was carried out at MTsN 1 Ponorogo which is located on Jalan Jendral Sudirman No. 24 A Josari, Jetis, Ponorogo. The research implementation time starts from February to March 2022. The study population was all students of class VII MTsN 1 Ponorogo starting from class VII A – VII J which amounted to 309 students. Meanwhile, the research sample was taken using the cluster random sampling technique by taking randomly 2 classes, namely class VII G and VII H.

The collection of research data uses observation techniques with observation sheet instruments. The observation sheets used are learning implementation sheets, student activities and collaboration skills. Before being used in the study, the observation sheet was validated to five expert validators and then a content validity test (aiken) was carried out to see whether the instrument was valid or not. Furthermore, data and information were obtained by making observations in the control group and experimental group. These two test groups have similar characteristics. It's just that the experimental group was given special treatment in the form of a Susan Loucks-Horsley (SLH) learning model using the Small Group Discussion (SGD) method. Meanwhile, in the control group, conventional learning is applied with a discussion method.

The observation sheet for the implementation of learning and student activities in this study is in the form of a checklist. The observation guidelines used are like the following table.

Table 1. Categories of Observation Guidelines

Alternative Answers	Categories of Answer Results
Yes	Statements occur during the learning process
No	Statements not occur during the learning process

Answers can be made the highest score of 1 and the lowest zero i.e. for the answer "Yes" is given a score of 1 and the answer "No" is given a score of 0. The data obtained is then analyzed by the formula:

$$Score\ Observation = \frac{earned\ score}{ideal\ score} \times 100$$

After obtaining the results of the observation score, it can be interpreted according to the following table.

Table 2. ObservationAl Interpretation Criteria

Average Validation Score	Criteria
<40%	Bad
40% – 55%	Not Good Enough
56% – 75%	Good Enough
76% – 90%	Good
91% – 100%	Excellent

The learner collaboration skills observation sheet uses a likert scale consisting of five scores with categories: 1 = Never, 2 = Sometimes , 3 = Often Enough, 4 = Often, and 5 = Always. The collaboration skills observation sheet is

made based on indicators of collaboration skills, namely having an active contribution in the group, having productive performance, having good group performance, showing responsibility, showing an attitude of respect for others, showing flexibility and compromise in the group, and being able to mobilize tasks in the group.[17] The observation sheet was filled by three observers. Observations are made on each student. The data obtained is then analyzed by the formula:

$$Collaboration\ Value = \frac{earned\ score}{ideal\ score} \times 100$$

This observation score will also be the value of each learner's collaboration skills.

The value of the collaboration skills obtained is then processed using statistical analysis. This analysis consists of two stages of testing, namely the prerequisite test and the hypothesis test. The prerequisite test consists of a normality and homogeneity test. While the hypothesis test uses a t test, namely an independent sample t-test and a one-tailed t-test. Data processing in this study used SPSS applications and minitab for windows.

Result and Discussion
Research results

Observation of learning implementation refers to an observation sheet that is adjusted to the learning steps in the Susan Loucks Horsley (SLH) model and the Small Group Discussion (SGD) method. Observations were made in experimental classes. The results of the observations can be seen in the following table.

Table 3. Observational Data on Learning Implementation

Ideal Score	Score	Percentage	Category
20	20	100%	Excellent

The results of these observations, if interpreted, are in the very good category with a percentage of 100%. These results show that all SLH learning syntax and SGD methods have been implemented all in the study.

Student activity was observed during learning using the Susan Loucks Horsley (SLH) model and the Small Group Discussion (SGD) method in the experimental class. From the results of observations during the learning process, the activities of students in the experimental class can be seen in Table 4.

Table 4. Student Activity Observation Data

Ideal Score	Score	Percentage	Category
20	20	100%	Excellent

The results of these observations, if interpreted, are in the very good category with a percentage of 100%. These results show that all SLH learning activities and SGD methods have been carried out all in the study.

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[17] Cornelia Deriyanti Setyaningsih Setyaningsih, "Peningkatan Keterampilan Komunikasi dan Kolaborasi dengan Menggunakan Model Pembelajaran Kooperatif Tipe Group Investigation Materi IPA Pada Siswa Kelas V SD Kanisius Jomegatan," *Skripsi Prodi Pendidikan Guru Sekolah Dasar*, no. May (2020): 1–438,

The observation data of collaboration skills are categorized into two, namely initial observation before treatment and final observation after treatment. After Susan Loucks Horsley's (SLH) learning using the Small Group Discussion (SGD) method, the collaboration skills of students in the experimental class increased. The following are the average results of the initial observation scores and the end of the experimental class:

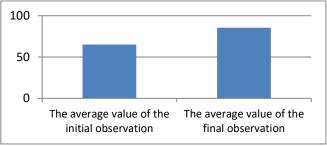Figure 1. Experimental Class Collaboration Skills Data

Figure 1 shows an increase in collaboration skills in the experimental class. The average initial observation value was 65.16 and increased to 85.53 at the final observation. These results show an increase in collaboration skills after the implementation of SLH learning using the SGD method.

Table 5. Normality Test of Preliminary Observation Data

Tests of Normality							
		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Kelas	Statistic	df	Sig.	Statistic	df	Sig.
Initial_Observation	Kelas_Eksperimen	,083	32	,200*	,980	32	,809
	Kelas_Kontrol	,115	32	,200*	,951	32	,149
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

Table 5 shows the results of the initial observation normality test. From the table it can be seen that the results of the Kolmogorov Smirnov test showed a significance of 0.200 in the experimental and control classes. The value is more than α (0.05), so it can be concluded that the two classes are normally distributed.

Table 6. Initial Observation Data Homogeneity Test

Test of Homogeneity of Variances				
		Levene Statistic	df1	df2	Sig.
Initial_Observation	Based on Mean	,831	1	62	,366
	Based on Median	,715	1	62	,401
	Based on Median and with adjusted df	,715	1	60,733	,401
	Based on trimmed mean	,880	1	62	,352

Table 6 shows the results of the initial observation homogeneity test. Levene's test showed significance values of 0.305 and more than α (0.05). So it can be concluded that the preliminary observation data of the two test classes (experimental and control) are homogeneous.

Table 7. Final Observation Data Normality Test

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Observasi_Akhir	Statistic	df	Sig.	Statistic	df	Sig.
Final_Observ ation	Kelas_Eksperimen	,128	32	,200*	,955	32	,196
	Kelas_Kontrol	,097	32	,200*	,977	32	,700

Tests of Normality

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Table 7 shows the results of the final observation normality test. From the table it can be seen that the results of the Kolmogorov Smirnov test showed a significance of 0.200 in the experimental and control classes. The value is more than α (0.05), so it can be concluded that the two classes are normally distributed.

Table 8. Final Observation Data Homogeneity Test

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Final_Obse rvation	Based on Mean	1,392	1	62	,243
	Based on Median	1,351	1	62	,250
	Based on Median and with adjusted df	1,351	1	59,098	,250
	Based on trimmed mean	1,318	1	62	,255

Table 8 shows the results of the final observation homogeneity test. Levene's test showed significance values of 0.243 and more than α (0.05). So it can be concluded that the final observation data of the two test classes (experiments and controls) are homogeneous.

Table 9. Independent Sample T-test Results Preliminary Observation of Experimental and Control Classes

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Collaboratio n _InitialObser vation	Equal variances assumed	,831	,366	1,588	62	,117	1,719	1,082	-,445	3,882
	Equal variances not assumed			1,588	60,765	,117	1,719	1,082	-,446	3,883

Based on Table 9, it can be seen that the significance value on the t-test > 0.05, which is 0.117. So that H0 is accepted and the conclusion can be drawn that there is no difference in collaboration skills between the experimental and control classes. The results show that between the experimental and control classes have the same initial collaboration skills.

Table 10 Independent Sample T-test Results Final Observation of Experimental and Control Classes

Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Collaboration _FinalObservation	Equal variances assumed	1,392	,243	6,592	62	,000	7,188	1,090	5,008	9,367
	Equal variances not assumed			6,592	59,057	,000	7,188	1,090	5,006	9,369

Based on Table 10, it can be seen that the significance value on the t-test < 0.05, which is 0.000. So H0 was rejected and there was a difference in collaboration skills between the experimental and control classes. These results show the influence of the use of the SLH model with the SGD method on the collaboration skills of students.

Figure 2. T-test One Tailed Test Results Final Observation of Experimental and Control Classes

Two-Sample T-Test and CI: Eksperimen; Kontrol

Two-sample T for Eksperimen vs Kontrol

      N Mean StDev SE Mean

Eksperimen 32 87,53 3,84   0,68

Kontrol   32 80,34 4,82   0,85

Difference = mu (Eksperimen) - mu (Kontrol)

Estimate for difference: 7,19

95% lower bound for difference: 5,37

T-Test of difference = 0 (vs >): T-Value = 6,59 P-Value = 0,000 DF = 59

Based on the test results of the One Tailed T-test, a P-Value value of 0.000 was obtained. When compared with α (0.05) , the value is less or less than 0.05 so the hypothesis H0 is rejected. Therefore, it can be concluded that classes that get the Susan Loucks Horsley (SLH) model treatment and the Small Group Discussion (SGD) method are better at improving collaboration skills in class VII students in MTsN 1 Ponorogo compared to conventional learning combined with discussion methods.

Table 11. Experimental and Control Class N-Gain Score Test Results

N – Gain Score (%)		
Value	**Experimental Class**	**Control Class**
Average	**59,07**	**36,87**
Minimum	37,50	26,19
Maximum	73,33	50,00

Based on the results of the N-Gain Score test in table 11, it can be seen that the average value of the experimental class is 59.07%. These results are in the

category of quite effective. Meanwhile, in the control class, the average score obtained was 36.87% and was in the category of ineffective.

Based on these results, it can be concluded that the use of the Susan Loucks Horsley (SLH) learning model with the Small Group Discussion method is quite effective in improving student collaboration skills. Meanwhile, the use of conventional learning models combined with discussion methods is not effective in improving collaboration skills in students.

Discussion
The Implementation of Learning Using the Susan Loucks-Horsley (SLH) Model with the Small Group Discussion (SGD) Method

Overall, the implementation of learning using the Susan Loucks Horsley (SLH) model and the small group discussion method went very well. From the results of the observation of the implementation of learning in Table 3, it shows that every step of learning slh and the SGD method is all carried out. Susan Loucks Horsley's (SLH) learning, which is integrated with the small group discussion method, focuses on small-scale group discussion activities consisting of 4 students. This small-scale discussion aims to optimize the division of roles, duties and responsibilities of learners when group learning. Through small discussions, students are more free to express ideas, do not depend on others for tasks, and have a tendency to be easier in the division of tasks. So that the discussion process runs conducively, actively, and productively.

The use of SLH models and SGD methods makes learning more interesting and meaningful; develop knowledge, attitudes and skills; and support the independence and cooperation of students. In addition, the learning process also fosters creativity, integrating science and technology and the surrounding environment. With these results, it can be concluded that the implementation of learning using the SLH model and the SGD method has been applied in research in accordance with the syntax of the SLH learning model and is running very well.

Student Activities Using the Susan Loucks-Horsley Learning Model (SLH) and the Small Group Discussion (SGD) Method

Based on the observation sheet of student activities filled by the observer, it can be known that the overall activity of students using SLH and the SGD method is classified as very good. This is evident from the results of observations of student activities in Table 4 which shows that every aspect of student activities is carried out all. With these results, it can be concluded that the activities of students using the SLH model and the SGD method have been applied in the study in accordance with the syntax of the SLH learning model and are running very well.

During the learning, it can be seen the activeness and enthusiasm of the students. Students actively ask the teacher about material that is not yet understood. In group discussions, students are also actively involved in the discussion process. They are able to express opinions in discussions and respect the opinions of other members, participate and contribute to the resolution of group LKPD, be consistent in discussions, and are able to reach group

agreements. In addition, students are also able to present the results of the discussion well and answer the questions quite well. This is in accordance with what Muiz said in his research which states that each stage of SLH learning can bring out the activeness of students in learning and collaborating.[18]

There are differences in student activity in experimental and control classes. In terms of activity, students in the experimental class are classified as more active in learning than students in the control class. This activeness can be seen from the enthusiasm of students in group discussions. Students in the experimental class are more courageous to express their opinions in groups of 4 people. Discussions conducted in small forums make it easier for them to unite opinions and make decisions. Group quarrels are also more minimized. In addition, hanging tasks on other members is also more minimized because of the division of tasks on each group member. But in a control class where each group of 8 learners had more difficulty in putting arguments together. They also have a tendency to depend on other members. So that the contribution of each member does not run as a whole.

The Effectiveness of the Susan Loucks-Horsley (SLH) Model with the Small Group Discussion (SGD) Method in Improving Student Collaboration Skills

Based on the analysis of the t test in the final observation showed the results of the significance of the < α (0.05) which was 0.000. This indicates that there is an influence of the use of the Susan Loucks-Horsley (SLH) learning model with the Small Group Discussion (SGD) method on collaboration skills. Learning using the SLH model and the SGD method is also better at improving collaboration skills in learners. This is in accordance with the results of the one-tailed t-test analysis which shows a P-Value value of 0.000 and a < α (0.05). Meanwhile, the results of the N-Gain score analysis showed the average value of the final collaboration skills in the experimental class of 59.07%. Based on these results, it can be concluded that the use of the Susan Loucks Horsley (SLH) learning model with the Small Group Discussion method is quite effective in improving student collaboration skills. These results are in line with research conducted by Abdul Muiz and friends (2016) which stated that there was an increase in collaboration and communication skills in students with the Susan Loucks-Horsley (SLH) learning model.[19]

The description of the indicators of collaboration skills encountered in this study is as follows:

1. Having an Active Contribution in Group

    This Indicator Group is trained in 4 stages of SLH learning, namely invited; explore, discover, and create; purpose explanation and solution; and taking action. The four stages of learning train students to express ideas, opinions, give suggestions or solutions. In addition, it also trains to be directly involved in decision-making and problem-solving of the group.

2. Have Productive Performance

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[18] Muiz et al., "Implementasi Model Susan Loucks-Horsley terhadap *Communication and Collaboration* Peserta Didik SMP."

[19] Muiz et al.

This indicator relates to the ability to make use of time and give good task results.[20] This indicator is trained in the explore, discover, and create stages; purpose explanation and solution; and taking action. Indicators of having productive performance can be assessed when students carry out discussion activities. Such as the consistency of students in participating in discussions, focusing and carrying out the tasks given, collecting tasks on time, and being able to provide good task results. The results of the task can be assessed when the group makes a presentation and the results of solving problems in the LKPD.

3. Having Good Group Performance

Indicators of having good group performance are related to the ability of learners in group discussions. Such as the ability of students to avoid group quarrels, complete tasks together, and help each other between group members.[21] This indicator is trained during the explore, discover, and create stages; purpose explanation and solution; and taking action. During the discussion process, each student is trained to work on each other's tasks by working together and not relying on their group of friends. They are also trained to help their group mates who have difficulties in understanding the material or working on tasks.

4. Showing Responsibility

The responsibility of the learner can be observed during the discussion process. Students are able to carry out the tasks given according to instructions and are always consistent in group discussions.[22] So that this indicator is trained at the stages of explore, discover, and create and take action. Through this stage, students are trained to account for the results of answers to the LKPD in accordance with the sources obtained. They are also trained to remain consistent in discussing problems by always showing contributions in the form of opinions, ideas, or suggestions.

5. Showing an Attitude of Respect for Others

This indicator is assessed at the beginning to the end of learning. Learners are said to achieve this indicator if during learning they show an attitude of respect for others, both teachers and other learners. They also listen and pay attention to the teacher's explanation or the opinion of a friend. In addition, they are also able to appreciate the opinions or performance results of their friends. This indicator is trained at all stages of SLH learning.

6. Showing Flexibility and Compromise in Groups

Indicators of flexibility relate to the learner's ability to accept suggestions or criticisms from others, accept group differences or decisions, and be able to reach group agreements. Meanwhile, compromise can be interpreted as the ability of students to always compromise with the group

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[20] Rahmawati, Fadiawati, and Diawati, "Analisis Keterampilan Berkolaborasi Siswa SMA pada Pembelajaran Berbasis Proyek Daur Ulang Minyak Jelantah."

[21] Rahmawati, Fadiawati, and Diawati.

[22] Rahmawati, Fadiawati, and Diawati.

in solving problems.[23] This indicator is trained during the explore, discover, and create stages; purpose explanation and solution; and taking action. All members of the group accept a joint decision when discussing the LKPD and seek application of the material. Students are also able to accept criticism and suggestions from their friends and always compromise with the group. Meanwhile, in the purpose explanation and solution stage, students are trained to receive suggestions, opinions, and criticisms related to the results of the discussion that has been presented.

7. Able to Mobilize Tasks in Groups

This indicator is related to the ability of students to divide the tasks of each group member and not to depend on other members.[24] During learning, this indicator is trained in the stages of explore, discover, and create and take action. Because in both stages there are group discussions that demand a division of duties and responsibilities of each group member. This is so that during the discussion process, all group members contribute actively without anyone relying on group tasks to only one or two people.

Conclusion

The implementation of learning and student activities using the Susan Loucks-Horsley (SLH) model with the small group discussion method at MTsN 1 Ponorogo has been carried out very well. The use of the SLH model with the SGD method is effective in improving the collaboration skills of class VII learners in MTsN 1 Ponorogo.

Reference

Christiani, A., and Mintohari. "Penerapan Metode Small Group Discussion Dengan Model Cooperative Learning Untuk Meningkatkan Hasil Belajar Siswa Sekolah Dasar." *Jurnal Penilitian Pendidikan Guru Sekolah Dasar* 2, no. 2 (2014): 1–11. https://media.neliti.com.

Hidayati, Nurkhairo. "Collaboration Skill Of Biology Students At Universitas Islam Riau, Indonesia." *INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH* 8, no. 11 (2019): 208–11.

Kurniawati, Farida Nova, Susanto Susanto, and Ahmad Munir. "Promoting Students' Collaboration Skill Through Project Based Learning of English Writing." *Jurnal Ilmiah Program Studi Pendidikan Bahasa Inggris* 10, no. 1 (2019): 29–42. https://doi.org/10.33373/anglo.v10i1.1890.

Muiz, Abdul, Insih Wilujeng, Jumadi, and Senam. "Implementasi Model Susan Loucks-Horsley Terhadap Communication and Collaboration Peserta Didik Smp." *Unnes Science Education Journal* 5, no. 1 (2016): 1079–84. https://doi.org/10.15294/usej.v5i1.9565.

Ofstedal, Kathleen, and Kathryn Dahlberg. "Collaboration in Student Teaching: Introducing the Collaboration Self-Assessment Tool." *Journal of Early Childhood*

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[23] Nurkhairo Hidayati, "*Collaboration Skill Of Biology Students At Universitas Islam Riau, Indonesia,*" International Journal of Scientific & Technology Research 8, no. 11 (2019): 208–11.

[24] Hidayati.

Teacher Education 30, no. 1 (2009): 37–48. https://doi.org/10.1080/10901020802668043.

Prayoga, Ade Ogi. "Efektivitas Model Pembelajaran Susan Loucks Horsley (SLH) Ditinjau Dari Keterampilan Proses Sains." *Skripsi Pendidikan Fisika*, 2019, 1–98.

Rahmawati, Ayu, Noor Fadiawati, and Chansyanah Diawati. "Analisis Keterampilan Berkolaborasi Siswa SMA Pada Pembelajaran Berbasis Proyek Daur Ulang Minyak Jelantah." *Jurnal Pendidikan Dan Pembelajaran Kimia* 8, no. 2 (2019): 1–15.

Saraswati, Niken Fathia. "Implementasi Metode Pembelajaran Small Group Discussion Untuk Meningkatkan Aktivitas Belajar Pada Kompetensi Dasar Jurnal Penyesuaian Siswa Kelas X Akuntansi Smk Muhammadiyah Kretek Tahun Ajaran 2017/2018." *Skripsi* Universita, no. Fakultas Ekonomi (2018): 1–114. http://dx.doi.org/10.1016/j.neuropsychologia.2015.07.010%0Ahttp://dx.doi.org/10.1016/j.visres.2014.07.001%0Ahttps://doi.org/10.1016/j.humov.2018.08.006%0Ahttp://www.ncbi.nlm.nih.gov/pubmed/24582474%0Ahttps://doi.org/10.1016/j.gaitpost.2018.12.007%0Ahttps:

Setyaningsih, Cornelia Deriyanti Setyaningsih. "Peningkatan Keterampilan Komunikasi Dan Kolaborasi Dengan Menggunakan Model Pembelajaran Kooperatif Tipe Group Investigation Materi IPA Pada Siswa Kelas V SD Kanisius Jomegatan." *Skripsi Prodi Pendidikan Guru Sekolah Dasar*, no. May (2020): 1–438. https://www.slideshare.net/maryamkazemi3/stability-of-colloids%0Ahttps://barnard.edu/sites/default/files/inline/student_user_guide_for_spss.pdf%0Ahttp://www.ibm.com/support%0Ahttp://www.spss.com/sites/dm-book/legacy/ProgDataMgmt_SPSS17.pdf%0Ahttps://www.n.

Soifah, Utami. "Metode Small Group Discussion Untuk Meningkatkan Kompetensi Membaca Teks Hortatory Exposition." *Jurnal Penelitian Dan Kajian Pendidikan Islam* 3, no. 2 (2018): 137–53. https://doi.org/10.47736/tajdidukasi.v8i2.284.

Susanto, Sofyan. "Efektifitas Small Group Discussion Dengan Model Problem Based Learning Dalam Pembelajaran Di Masa Pandemi Covid-19." *Jurnal Pendidikan Modern* 6, no. 1 (2020): 55–60. https://doi.org/10.37471/jpm.v6i1.125.

Widayanti, E sti Yuli. "Pendekatan Konstruktivistik Dalam Model Susan Loucks-Horsley Untuk Pengembangan Karakter Siswa Tingkat Sekolah Dasar." *Seminar Nasional Pendidikan 2015*, no. November (2019): 752–61. http://seminar.umpo.ac.id/index.php/semnasdik2015/article/download/295/295.

Wulandari, Ana Yuniasti Retno, and Nurhayati Nurhayati. "The Relationship Between Verbal Ability and Critical Thinking Skill: The Implementation of Susan Loucks Horsley Model." *Jurnal Ilmiah Pendidikan Fisika Al-Biruni* 7, no. 1 (2018): 89–97. https://doi.org/10.24042/jipfalbiruni.v7i1.2507.