CHARACTER BUILDING AND THE INCREASE OF STUDENT ACTIVITY IN LESSON STUDY PRACTICE

Sri Walji Hasthanti
SD Muhammadiyah (Plus)
Jl. Yudhistira 40, Kec. Sidomukti, Kota Salatiga
hasthanti.sw@gmail.com

Abstract: This article is based on the result of observing students grade 4 of SD Muhammadiyah (Plus) Salatiga. The observation is carried out as part of character development and increase student activity using Lesson Study model during Mathematics lessons. The subject of the study are 16 students of grade 4 consisting of 9 males and 7 females. The data obtained through observation, interviews, literature study and field notes. The approach of the study is qualitative by using descriptive analysis method to describe and interpret objects as they are. The study shows a promising result in students' character development through repeated enforcement using the Lesson Study. This is shown by the prominent characteristics such as honesty, independence, tolerance, respecting others' opinions, self-confidence, and creativity. Students' activities encompassing *Visual Activities*, *Oral Activities* and *Emotional Activities* have also shown to be in the increase. The students were very enthusiastic which is shown from the percentage of those in the very good category 37.5% (5 students) and good category 43.75% (8 students).

Key words: *character development, students' active participation, Lesson Study*.

INTRODUCTION

Mathematics is considered to be a challenging subject especially for those studying at primary level (Hasthanti, 2019). This idea is believed to be one of the sources of students not keen on learning Mathematics. Asrori (2009:241) stated that mathematics is often felt more challenging than other subjects which resulted in poor learning. Various teaching and learning methods have been developed and trialled to make Mathematics more interesting to encourage positive learning. Teachers play important roles to increase learning quality especially in managing classroom to assist students to reach their learning objectives (Irawanti, 2017).

Students have difficulty in applying mathematical concepts in daily life which contributes to the idea that mathematics is not as useful. Teachers are not relating classroom materials with students' existing knowledge and not giving students a chance to re-invent and construct ideas using Mathematics (Wahyuni, 2017). Relating learning mathematics with daily life experience will result in a more enjoyable learning experience. Moreover, the students are likely to retain the knowledge because they can apply it in the real life.

Relating mathematical theories with real life has to be consistent with the level of difficulty and comprehension. Teachers will also need to be proficient in various methods of teaching and learning Mathematics to ensure students' competency pertinent to their level of learning (Amirulah, 2018). Teachers' proper acquisition of teaching and learning techniques will result in a more pleasant learning which will encourage students' active participations. By actively participating in the teaching and learning process, students are likely to comprehend the material more easily resulting in a more pleasant learning experience and increase performance. Rismawati (2017) pointed out that one of the necessary skills a teacher should possess is how to design and carry out

a teaching and learning process which are in line with the targeted objectives and achieved levels of competency.

Risnanosanti et al (2018) argued that one of the methodologies that can be used to increase the chance of a successful teaching and learning process is by practicing Lesson Study. In Indonesia, Lesson Study is marketed as an alternative model to increase students' performance and as means to give teachers feed back to adjust teaching methods which are relevant with the needs of the students. Teachers adopting the Lesson Study focus on students' activities encouraging those who are passive, unconfident and those fear of expressing their opinions to be more active by creating a conducive learning environment. In other words, Lesson Study serves as a bridge to obtain a successful and ideal teaching and learning process.

Learning activity can be seen from students' physical and mental activities throughout the learning process. If students are physically and mentally involved in the learning process, they are likely to find the learning process more enjoyable thus producing maximum learning efforts. Sadirman (2006) stated that learning activities are those involving both physical and mental. In learning both are interrelated. Hamalik (2009) in Irawanti (2017) stated that learning activities are activities done by students. This means learning activity is a process whereby teachers create a learning environment that encourages students to actively ask, question and express opinions.

Paul B. Dietrich in Sadirman (2006) pointed out seven learning activities, they are *Visual Activity* which includes reading, paying attention to pictures, demonstrating, trying. *Oral Activity* which includes stating, formulating, asking, giving advice and expressing opinion. *Listening Activity such as* listening to conversation, discussion, and giving a speech. *Writing activity* for example, writing a story, composing, reporting and copying. *Motor activity* such as experimenting, constructing, repairing model, playing, gardening and farming. *Mental activity* includes responding, reminding, problem solving, and analysing. *Emotional activity* can include showing interest, boredom, feeling happy, enthusiasm, bravery, calmness, feeling nervous. Categorizing those activities shows that students learning activity is very complex. Learning activities can be made pleasant by providing a variety of learning models that will encourage students' active participation.

Students' characters also play an important role in the teaching and learning process in school. Anita Lie (2010) suggested that students' character building refer to the value that will be developed in school. This takes place during classroom interaction or while the teaching and learning process is taking place. The agreed values of characters during the process of Lesson Study are honesty, tolerance, discipline, creativity and independence. The stated character building objective is aligned with students' activities which will be observed throughout the Lesson Study process. This will include observing the interaction among students and the teachers. This is where teachers play a role in assisting students with their characters' development associated with their activities (Marini, 2017). Coordinated character development in the teaching and learning Mathematics will encourage self-confidence, honesty, tolerance, self-confidence, responsibility, willingness to express opinions and presenting ideas mathematically.

From the aforementioned background, the problem of the study that will be analysed are (1) how to develop students' characters during Mathematics lesson using Lesson Study (2) how active are the students of grade 4 of SD Muhammadiyah (Plus) Salatiga in learning integer division using Lesson Study. The objective of this article is to present a general idea about character building and students of SD Muhammadiyah (Plus) Salatiga activities using Lesson Study especially in learning Mathematics.

METHOD

The study took place in SD Muhammadiyah (Plus) Salatiga. The subjects of the study are sixteen students of grade 4 of the school which consists of 7 females and 9 males. The study was conducted in August 2021 during a limited face to face session. The study is qualitative in nature using a descriptive analysis to describe character building and students' activities in learning Mathematics using Lesson Study. A qualitative study is a research procedure that produces descriptive data in form of verbal remarks, written forms and behaviours of the observed subjects. (Bogden & Biklen in Sutama, 2015). A descriptive methodology is described as a method to describe/interpret objects as they are (Creswell, 2010). The data of the study is collected through observation, interview, study of the literature and field notes.

Lesson study is carried out in three stages namely (1) lesson plan, (2) teaching and in class observation (do) and (3) reflection of the analysis of the teaching process, discussion and a collective summary of the result of the teaching process (see). The various stages of lesson plan in the teaching of Mathematics using the Lesson Study method, as quoted by Lewis and Hendaya in Prishaswati et al (2017) include planning (Plan), doing (Do) and reflecting (See) incorporating teachers as observers, assisting classroom teachers in preparing materials and offering input/reflection.

The cycle of the process is carried out in three stages as depicted in the diagram below:

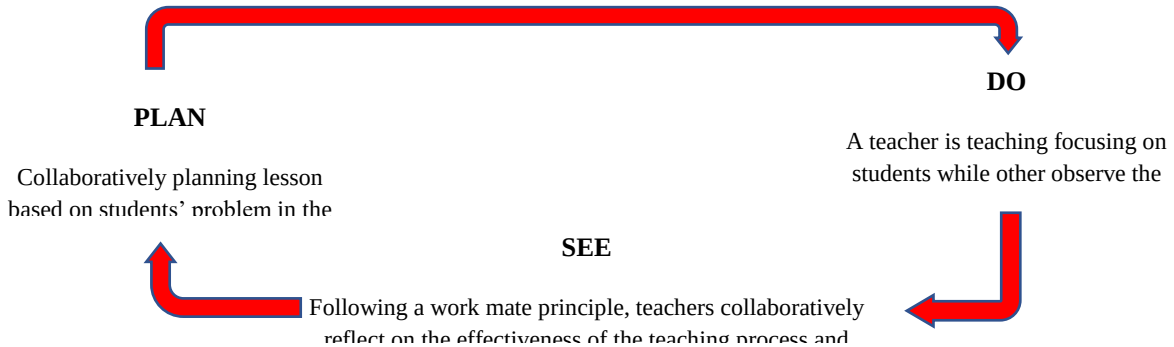

Fig. 1 Lesson Study Stages
Source: Rismawati (2010)

During the **Plan** stage, the teaching is done by a team consisting of a model teacher, other teaching colleagues including a subject expert (mathematics) and other teachers as observers. This team plan the process which covers the materials, establishing agreed teaching objectives and discussed relevant teaching aids. The **Do** is the execution of agreed teaching and learning process. Students are taught in a comfortable yet natural setting. The teacher stands on the side of the class, keeping a distance from students so as to not disrupt their activities but is free to observe their learning activities. While observing, the teacher is filling out the prepared observation sheet. The last stage **See** is the point where teachers reflect on the executed process by discussion. The model teacher expresses experience and impression about the process. The observers then comment and provide their views about the activities. The main objective of this stage is observing students' behaviours and how active they are in participating during the process.

In this study, students' active participation during the process is measured through (1) *visual activities* which focuses on how much students pay attention to the teacher whilst s/he explains the content of the lesson, how much the students look at the explanation of the content through pictorial demonstration and how much they read the materials given. (2) *oral activities* include how active students ask and answer questions from the teacher, comment or offer

suggestions pertinent to the content and how active they are in discussion. (3) *emotional activities* include how confident students are, how keen they are in expressing opinions, how much they show interest and how motivated they are in getting involve in the process and individually complete the tasks.

RESULTS AND DISCUSSION

The practice of Lesson Study in Mathematics lesson on integer division of grade 4 SD Muhammadiyah (Plus) Salatiga, the teacher gives students freedom to solve division problems in various ways that have been taught at the previous meeting. The material was delivered by repeating the basic concepts of integers, largest number factors, number factors, prime numbers, and prime factorization as well as three ways of solving greatest common factors (GFC) by factoring, tree factors and swale techniques.

Building Students' Character

Character education in SD Muhammadiyah (Plus) Salatiga is applied to all aspects of learning in comprehensive and integrated manner. These character values are instilled in every activity at school so as to form character. Character formation is not instantaneous but through habituation of daily activities. Likewise, when learning Mathematics with Lesson Study on the material for the division of integers, grade 4 SD Muhammadiyah (Plus) Salatiga. teachers always encourage students to try, make choices about how to work, be independent and discipline to use time.

During the Lesson Study practice, the teacher gave some practice questions to work on. It looks like students are really working on their own. Each works using the they think is easiest to solve the division problem. When the teacher asked the designated student's answer, other students seemed to be listening and appreciating his friend's answer. This proves that the character of tolerance and respect for opinion of their friends is highly respected, even though they use different solutions. In addition, students who have not been able to answer the question correctly also admit honestly that their counting method is less precise and try to improve their answer in a way that they think is easy. The character of honesty is also seen when students work on questions, namely working on their own.

When the teacher offers three ways to solve the problem of dividing integers, students are free to choose the way they think is easy. This shows that students are encouraged by the teacher. Freedom of choice is offered by the teacher as a form of learning independence for students. Another character that is seen during the implementation of Lesson student discipline. This can be seen from the used of time given to students to do the work they do not waste. They worked meticulously and finished in almost the same time.

The result of this observation of character formation cannot be measured by number/statistics. However, it will be seen as a good habit that is embedded in students. Judiani (2010) states that the character that is formed due to habituation is seen in spontaneous activities, which occur at the time. Character formation is supported by the classroom environment and sense of comfort during learning interactions. Furthermore, Jundiani (2010) argue that the character building uses an active and student-centered approach to the learning process of students. This is in accordance with what happened when learning Mathematics with Lesson Study. Students have been behavior that shows good character values.

Observations of integrated character formation in learning seem natural, including good interaction and communication between students as well as students and teachers (Marini, 2017). This is evident when the teacher explains the subject matter and examples of

how to solve the division problem, the students listen quietly. This shows that students appreciate the teacher who is talking and respect other friends who are also studying or listening to the teacher's explanation. Likewise, when the teacher and students together make conclusions at the end of the lesson, students appreciate the opinions of friends who have different ways to solve the problems given by the teacher. They reflect on learning together by expressing what they feel when learning with Lesson Study.

The Increase of Student Activity

The focus on observation on Lesson Study activities is carried out during the Mathematics learning process. In practice, the observer teacher uses an observation sheet that has been prepared previously. During the implementation the observer acts as a passive participant. Observation of student activities in learning Mathematics is focused on three aspects, namely (1) Visual Activities, (2) Oral Activities, and (3) Emotional Activities.

Visual Activities indicators include students' attention when the teacher makes apperception and explains the learning material, pays attention to the demonstration slides for solving Math problems, and reads the material to be studied. When learning Mathematics with Lesson Study took place, it was seen that many students were enthusiastic, concentrated, and serious. When the teacher delivered number division material and gave examples of solving integer division operations, most of the students paid close attention so that the material presented by the teacher could be understood by them. The percentage of success of the indicator reaches 88.08%.

Oral Activities include the activeness of students in asking and answering questions from teacher, commenting or giving suggestions according to the discussing. Students are given choice of how to solve the problem of dividing integers by using factoring, factor trees or swale techniques. When teacher asked questions, many students dared to answer without being appointed by the teacher. During the discussion, students looked active, independent and did not see students who depended on other friends sitting nearby. The percentage of success of this indicator reached 83.23%

Indicators on Students' Emotional Activities in the learning process are looking confident, daring to express opinions, showing interest and enthusiasm during learning, and being able to do assignments independently. The independence of students in doing assignments is good. Students have been active in doing assignments because they feel responsible for solving and trying to answer correctly. Students who do not understand in doing the task have dared to ask the teacher. The achievement of this indicator reached 81,06%.

The average value of student activity in Mathematics learning activities with Lesson Study reached 82.46% out of a maximum value 100. The percentage graph of the three aspect of activity can be seen below.

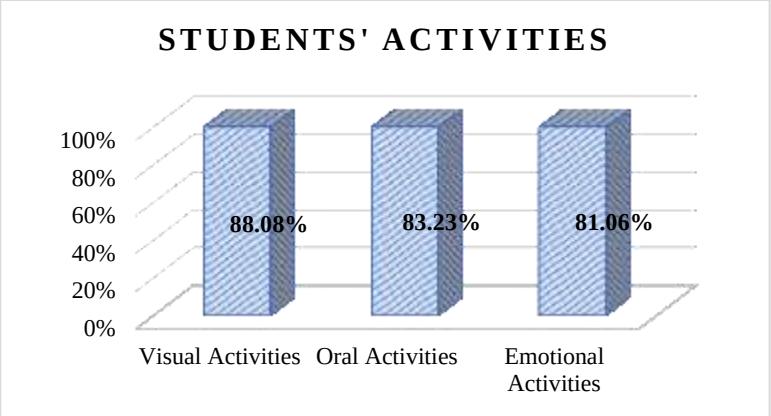

Fig. 2 The percentage graph of students' activities in learning Mathematics

While the diagram frequency distribution of student activity scores can be seen below.

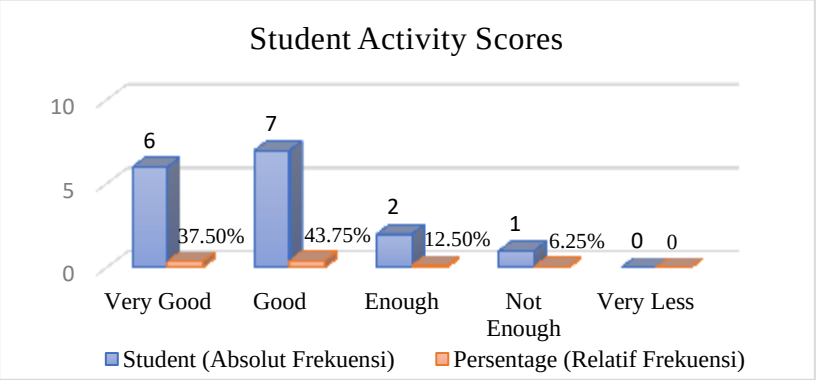

Fig. 3. Frequency Distribution of Student Activity

From the figure above, it can be seen that the general activity of students is good, namely 7 students or 43. 75%; 6 students or 37.50% shows very good activity; while 2 students or 12.50 % were in the sufficient category and only 1 student or 06.25% showed less activity. This is because when learning take place, students lack confidence because they have not been able to complete the practice questions.

The implementation of the learning process must be based on the principle of optimal interaction between teachers and students, between students, and students with various learning resources including the environment (Irawanti, 2017). Student activities in learning become a very important part in the implementation of the learning process.

CONCLUSIONS

Based on the result of observations during learning Mathematics with Lesson Study practice, it can be concluded that the formation of student character through habituation during activities at school and during the learning process has been going well. This is evident from the characters seen during the learning process, including honesty, independence, tolerance, respect to the opinions of others, discipline, confidence, and creativity. Character building is done repeatedly until it is formed. Thus, although character formation cannot be measured statistically, its success can be seen from students' attitudes and daily behavior.

The increase in student activity during Mathematics learning with Lesson Study practice is quite good. Assessment of student activities is carried out using student activity observation sheet that cover three aspects, namely *Visual Activities* (88,08%), *Oral Activities* (83,23%), and *Emotional Activities* (81,06%). Students are very enthusiastic in participating in learning, this can

be seen from the number of students and the percentage of activity in the very good category, that is 37.50% or 5 students and in the good category 43.75% or 8 students.

REFERENCES

Amirullah, Aini Haziah. (2018). Lesson Study: An Approach to Increase of Lesson Competency of Out-of-Field Mathematics Teacher in Building the Students Conceptual Understanding in Learning Mathematics. *Journal of Educational Sciences*. Vol. 2, No. 2, 1-13. https://jes.ejournal.unri.ac.id accessed 27 August 2021.

A.M., Sardiman. (2006). *Interaksi dan Motivasi Belajar Mengajar*. Jakarta: PT. Raja Grafindo Prsada.

Asrori, M. (2009). *Psikologi Pembelajaran*. Bandung: CV. Wacana Prima.

Creswell. (2010). *Research Design: Pendidikan Kualitatif, Kuantitatif, dan Mixed.* Yogyakarta: Pustaka Pelajar.

Hasthanti, SW. (2019). Media Kait Data Untuk Meningkatkan Aktivitas dan Hasil Belajar Matematika dalam Perkalian Bilangan Cacah Melalui Pendekatan Pembelajaran Matematika Realistik Indonesia (PMRI) pada Siswa Kelas II SD Muhammadiyah (Plus) Kota Salatiga tahun Ajaran 2019/2020. *Penelitian Tindakan Kelas*. Tidak dipublikasikan.

Irawanti, Ana. (2017). Peningkatan Hasil Belajar IPS Melalui Pendekatan Kooperatif dan Media Pager Neisa Pada Siswa Kelas V SD Muhammadiyah Plus Salatiga Tahun Ajaran 2017/2018. *PTK*. Tidak dipublikasikan.

Judiani, S. (2010). Implementasi Pendidikan Karakter di Sekolah Dasar Melalui Penguatan Pelaksanaan Kurikulum. *Jurnal Pendidikan dan Kebudayaan*. 16(9). 280-289. https://doi.org/10.24832/jpnk.v1619.519 . Accessed 2 September 2021

Lee, Anita. (2010). *Cooperative Learning*. Jakarta: Grasindo

Marini, A. (2017). Character Building Through Teaching Learning Process: Lesson in Indonesia. *Ponte International Journal of Sciences and Research*. DOI: IO.21506/j.ponte.2017.5.43. Accessed 2 September 2021.

Prihaswati, M., Andi, EP., Sukestiarno, Mulyon. (2017). Implementasi Lesson Study Sebagai Sarana Menumbuhkan Kemampuan Pemecahan Masalah Matematis pada Matakuliah Matematika Dasar. *Seminar Nasional Pendidikan Sains dan Teknologi Fakultas Matematika dan Ilmu Pengetahuan Alam Iniversitas Muhammadiyah.* https://jurnal.unimus.ac.id Accessed 1 September 2021.

Rismawati. (2017), Implementasi Lesson Study dalam Pembelajaran Matematika. *Asian Journal of Environment, History and Heritage*. Vol. 1, Issue. 1, p. 257-266. http://spaj.ukm.my . Accessed 27 August 2021

Risnanosanti, Raniwati. DM., Syofiana, M., Rinwayati, S. (2018). Lesson Study dan Peningkatan Profesionalisme Guru di SMP Negeri 11 Kota Bengkulu. *Jurnal Pengabdian Masyarakat Bumi Raflesia*. http://www.jurnal.umb.ac.id Accessed 30 August 2021.

Sutama. (2015). *Metode Penelitian Pendidikan Kuantitatif, Kualitatif, PTK, R & D*. Kartasura: Fairuz Media.

Wahyuni, Wahyudi. (2018). Praktik Lesson Study Menggunakan Pendekatan Matematika Realistik (PMR). *Prosiding Seminar Nasional Etnomatnesia*. Universitas Pendidikan Indonesia.