IMPROVING STUDENT’S LEARNING LIVELINESS OF NATURAL SCIENCE BY GIVING QUESTION AND GETTING ANSWER STARTEGY AT ISLAMIC ELEMENTARY SCHOOL

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Abstract

The aim of this research is to determine the improvement of students' learning liveliness in natural science subject at class IV of state Islamic elementary school (MIN) by applying the Giving Question and Getting Answer learning strategy. The research approach of this research is classroom action research by three action cycles referring to the Kemmis and Mc. Taggart. The subject of this study is the students class IV at MIN 2 Bandar Lampung TA. 2018/2019 as many as 30 students. The data is collected through observation, interview, documentation, and test. Analysis of this study uses qualitative and quantitative data approaches. The research discovery proves that the GQGA strategy is able to improve the students’ liveliness and learning outcome viewed by three aspects: cooperation, expressing opinion, and problem solving which an average of cycle I is 71.71%, cycle II is increase 82.18%, and cycle III also is increase 88.07% from the standard achievement 80%. Therefore, it can be concluded that the GQGA strategy can improve the students’ learning liveliness in the natural science learning on the theme “caring for environment, the various jobs, and my hero”.

Keyword: Learning liveliness, giving question and getting answer model, natural science.

Abstrak


Kata Kunci: Keaktifan Belajar, Model giving question and getting answer, Mata pelajaran IPA.
INTRODUCTION

This research is based by a discovery of the pre-research that is still found inequality of the students’ learning outcome, the low mastery of the material, and the student’s learning outcomes achievement decreased at MIN 2 Bandar Lampung. It is caused when learning most the students pay attention less to explanations when the teacher describes a lesson and is busy chatting with their peers. The classroom management and conditioning is yet very irregular engendering the students to be happier to play with their peers than to pay attention and learn. The results of observations carried out by the researchers in the natural science learning process at the fourth grade (class IV) B MIN 2 Bandar Lampung show that: "Most students pay less attention when the learning process, the students are embarrassed to ask, and are reluctant to express their ideas" (CL.1/MN-2/2019). The same statement from the class teacher said:

"... in the process of learning science, generally the ability to ask question, to give opinion or idea in the learning felt the students did not use to it, if not appointed or told they sometimes did not want to express or ask, which often ask the only children. Fundamentally, the children had not confident yet ..." (W/GR-KLS/MN-2/2019).

Based those conditions, information is obtained that the students’ value is low especially natural science lesson which has dropped drastically compared to previous years. The class conditions not supportive and completeness scores not achieved also result the students’ low learning liveliness. Certainly, it is contrary toward the ideal learning system as opinion (Rudyanto, 2014) a varied learning model is needed to support the students’ learning success. The above problems also cause their learning success being uneven. It is able to be based by the students’ result of KKM achievements in science subject, from 37 students, found only 13 children or 35% achieving the KKM standard, while others have not reached the KKM standard or as much as 65% (Doc.MN-2/2019). The factor is the teachers practicing a learning inaccuracy, still using conventional learning approach, and limited learning media so it does not focus to the students’ a development of science process skill. Finally, this situation, learning is only centered to material explanation which has an impact to the students’ low activity.

If that condition is left, it will have a negative impact to overall natural science learning in class IV as a whole in MIN 2 Bandar Lampung whereas natural science in elementary school is one of the important subjects in the curriculum. This is reflected and contained in the Graduate Competency Standard (SKL) which must be mastered by students to face the National Examination (UN), and even a material is used as a standard for the progress and success of international education by the world independent institutions Program for International Student Assessment (PISA). Thus, learning in elementary school has to be active, interesting, and fun for the students so the learning is more meaningful (Baharudin & Roplin Zakaria S., 2016). On the other side, natural science learning also requires readiness of the teacher to design and to implement the relevant learning process to characteristics of natural science material (Fiteriani, 2015). In other word, the teacher must be able to integrate material, strategy, and evaluation toward existing conditions of the surrounding environment during the learning process (Bujuri A. Dian; Baiti.M; Baharudin, 2020).

Based those various problems, it is necessary to strive for learning innovations including by using model, strategy, and learning technique that are more effective in realizing an active, creative, innovative and enjoyable learning process, and motivating the students to be actively involved in the learning process. It is some as the principle needed to be applied in the 2013 curriculum that is motivating students to actively find out, not be told (Aini & Relmasira, 2018). This is in line with the main goal of natural science learning to teach the students how to solve life problems so that they have habit to be able to think and behave scientifically, critically, creatively, and independently (Rusmiati, Santyasa, & Warpala, 2013). The basic characteristics of natural science learning are more demanding of the liveliness and involvement of students in learning. The
more involved students are in the learning process so they will be easier to understand and remember the learning which has been explained. Likewise, if the students are passive accepting lesson matter, they will forget the material easily.

Melvin L. Silbermen has recommended 101 ways of active learning can be used by educators (in Muttaqien. R, 2006: 115-299). One of them can be alternative to be used to enhance students' learning liveliness by utilizing the Giving Question and Getting Answer (GQGA) Strategy. Furthermore Melvin L. Silbermen stated that not only this learning strategy is can improve learning outcome but also can actually increase the students’ liveliness in learning.

Suprijono (2019: 107) revealed that the GQGA strategy was developed to train and respond to students so that they have the ability to ask and to answer questions. This is very necessary in supporting the learning process because those abilities are very important (essential) in the interaction pattern of teacher with students that can foster new knowledge and add experience in learning. The advantage obtained from implementing of that learning strategy can improve learning outcome (Kurino, 2018). Another benefit of applying the GQGA strategy is able to provide a widest opportunity for students, individually or in group, to ask questions that have just been understood, to share ideas, and to overcome the various matters of the material being taught, otherwise it can foster mutual respect among students (Yunus & Ilham, 2013).

Based on those above descriptions, researchers take action by applying the GQGA strategy to natural science learning to train students to build cooperation, formulating questions and giving response, and can inspire students to be active in the natural science learning process. Research on GQGA has been done by previous researchers such as research (Dasmiwati, 2017) about improving the learning outcome of social studies through the GQGA model, (Khaltsum & Imran, 2019) regarding the effectiveness of the GQGA strategy toward the character of students, (Wilinda, 2013) on the effectiveness of the GQGA strategy on learning outcome, (H. Yulianti, Iwan, & Millah, 2018) regarding the implementation of the GQGA strategy to improve the students’ learning outcome, and (Sudirman, 2015) on the effect of GQGA on students” mathematics learning achievement. These studies focus on student learning outcome and achievement, and the application of GQGA in learning other than natural science subject. It is contrast to this study which focuses on students' learning liveliness and applies the GQGA strategy to natural science subject. This study utilizes classroom action research by the hope that through implementation of the GQGA strategy, it can increase the students’ liveliness and learning outcome in the natural science learning with the theme: "caring for environment, the various jobs, and my hero".

RESEARCH METHOD

The use of research methodology is very important as a point of view. This study uses classroom action research conducted as collaboration (Burns in Associates, 2011: 9) with educators and education staff at MIN 2 Bandar Lampung, located on Jl. Drs. Warsito No. 50 Kupang Kec. Teluk Betung Utara, Bandar Lampung City. This research is carried out through cyclical procedure (Tampubolon, 2014: 19) to detect and solve problems faced by educators in the teaching and learning process by taking concrete action to improve the quality of teaching and learning in the class. This study utilizes a design model which has been developed by Kemmis and Mc.Taggert (Indriyani, Supriatna, & Sumantri, 2020: 88). It has four stages in each cycle: (1) planning, action, observation and reflection. This is research design:

According to the picture above, operationally the steps of this method are: first, planning: 1) analyzing the natural science curriculum for Islamic elementary school to determine the subject to be studied; 2) preparing learning resources used for example books, instruments, and references as learning resource; 3) designing learning media; 4) preparing learning tools including syllabus and lesson plan (RPP), and student’s worksheets (LKPD); 5) compiling the learning instrument; 6)
preparing an evaluation format and learning observation sheet; and 7) preparing equipment for research tools (cameras, recording devices, hand phone, etc.).

Second, the implementation (action): activity at this stage is the implementation of the plan has been prepared which has contained in the syllabus, RPP and LKPD implementing the GQGA learning strategy. Third, observation: this stage are conducted an observation in the learning process that is the process of action implementation, effect, result, and activity of students as long as the action process. All needed is noted using the observation sheet format. Fourth, reflection: in this stage, the data has been collected by the action process carried out is comprehensively reviewed to perfect the next action to find out the results of the student’s learning activities individually or in group.

The subjects of this research are students of class IV amounting to 37 students consisting of 21 women and 16 men. Determination of the class to take action based on the results of observation in the pre-research declaring the students’ low liveliness in the natural science learning process. The data collection tools in this study used observation sheet instrument, field note sheet, and documentation sheet to detect the students’ liveliness in participating in natural science learning referring to the minimum achievement standard of 80% and a maximum of 100% with criteria (very active, active, quite active, and not active), and test is used to determine the students’ ability to understand the material taught by applying the learning strategy Giving GQGA referring to the KKM standard. Meanwhile, to guarantee the level of trust and validity of data, it is processed and validated by triangulation, member checklist, and expert opinion.

RESULT AND DISCUSSION

Finding out the action result in this study, firstly researchers describe the systematic action. This research is conducted in three cycles of three meetings each by duration of 3 x 35 minutes. The action focus studies an improvement of students’ learning activities in aspect of collaboration, expressing suggestion, and solve problem. Then in each cycle is performed a test to measure the level of material understanding after taking action using GQGA capital of natural science learning in MI class IV. Each action is carried out with four steps namely planning, implementing, observing, and reflecting. Specifically, it can be listened to in the following description:

The Pre cycle

Before taking action, firstly the researcher performs a reflection of the pre-research result. It begins by observations to know the initial conditions before conducting research. The
observation focus wants to learn the level of student’s liveliness in natural science learning of class IV. According to that observation, the level of student’s liveliness is still very low relatively. It is seen when learning takes place, Only a few students who actively participating in learning. For example, when a teacher gives an opportunity to ask questions, out of 30 students, only 2 students give question. This is caused the learning given by the teacher still dominated because of classical model by learning monotonous learning approach, minimum learning media, and the class dominated by teacher (teacher center). As research results (Ayu, Indrayani, & Sumantri, 2018) explains that the inaccuracy of a learning model and teacher center effect student to be passive in learning and learning outcome to be low.

The effect of this classical learning model shows a level of collaboration, expressing opinion, and problem solving is very low. Afterwards, from early mapping by conducting a pre-test given to student, it is found only 30.3% of the 30 students achieving completeness agree with KKM achievement criteria, while 69.7% have not reached achievement criteria. Thus it can be concluded that the level of students’ liveliness in class IV MIN 2 Bandar Lampung has been relatively low.

**Cycle Action Result**

The pre-cycle data above is used as basis to perform cycle I, II, and III using GQGA strategy to determine the students’ liveliness in natural science learning. Based on the identification result of problem in the classroom, researchers determine plan formulation to take action that is preparing learning tools such as lesson plan, teaching material, learning media, and envelopes containing question and answer card. The research instrument consist of an observation sheet of implementing GQGA learning strategy, an observation sheet of students’ learning liveliness, and an assessment rubric as an observer's reference to observe during the action process.

Before taking action on implementing GQGA strategy, it is firstly started by a preliminary activity. The teacher conditions the students by checking attendance, designing seat, preparing learning media in each material taught. Furthermore she performs apperception or reviews the learning previously, then talking a theme and target of learning material.

In the action implementation activity, the teacher first reviews glance about the material which will be learned. Later, the teacher prepares and shares two envelopes; the first card is brown to write question and the second card is green to write topic that they will inform to each student. The teacher also divides students into small groups of 4-6 people according to the number of students. Entering action activity in group, students are first given the opportunity to discuss and select question and choose the topic to be explained. Second, after the topic has been chosen, students explain it in front of class, which then conducted an inter-city discussion in the group called a communicator. Third, learning is continued with question and answer activity. Alternately each group reads the questions have been chosen in front of class, while the other group are given the opportunity to answer, while other groups who have not had opportunity to answer questions are given opportunity to respond or add and clarify the answer have been given by other groups. Fourth, after all groups read questions, answer, and respond, the next activity presents the topic chosen by each group. It is represented by group member (communicators) who have been chosen randomly by the teacher in each group. Fifth, before ending the series of learning, teacher provides the opportunity for students to present a conclusion of learning in front of the class. Finally the teacher confirms and broadens understanding, and draws conclusions from the learning process, then ends the learning activity by giving an applause followed by all students.

The focus of this action research is to determine the level of students’ liveliness in natural science learning based indicators which have been utilized as a reference in assessment. This is done to make it easier for researcher to know the level of achievement during conducting
research using indicators as (1) aspect of collaboration; (2) aspect of expressing opinion/idea; and (3) aspect of problem solving. Those indicators of successful implementation of GQGA strategy in taking action are known by the level of material mastery which has been informed in each cycle through conducting a test. The score obtained by each cycle is then analyzed in a percentage form to make it easier for researchers to detect the improvement in each cycle.

Referring on finding of that action research, through field notes, interview to student and partner teacher, is known that the students’ liveliness in learning on the theme "caring my environment, various jobs, and my hero" have improved from Cycle I to Cycle III. At the same time, it also found the level of understanding of students' natural science material increased. The average percentage of the liveliness aspect of natural learning science in class IV students at MIN 2 Bandar Lampung obtained from the evaluation result as long as the research process shows an average result of 70.72% in cycle I, 82.18% in cycle II, and in cycle III obtained a score of 88.07%. This assessment is referenced by the students’ three abilities related to liveliness, namely aspect of cooperation, aspect of expressing opinion, and aspect of problem solving. In the aspect of cooperation is observed of students’ ability to work group assignment cooperatively, giving suggestion in group discussion, respect to friend, and pay attention when someone is expressing an opinion or idea. Afterwards, aspect of expressing view is observed by students’ ability to give or express opinion by their own language, giving correct answer and provide clear arguments to question from friend and teacher confidently and smoothly without stammer, able to ask question and to understand question, and be responsive by responding question from other group friends. The last, aspect of problem solving is observed by students’ ability to identify main matter in group discussion, they are able to identify problem to questions raised by other group friends, and they can note important things when the discussion takes place.

Thus, the students’ learning liveliness, by using the GQGA strategy, is very active. The detail can be seen in the diagram below:

![Diagram 1. The development of students' learning liveliness through GQGA strategy](image)

Source: The observing data processing result of learning liveliness for each cycle

While observed from the process of implementing the GQGA strategy individually, students obtain an average increase of learning outcome overall attained a score of 63% in cycle I, cycle II attained a score of 75%, and in cycle III attained a score of 81%. Summary, it can be read in this graph below:
Diagram 2. The development of students’ learning outcomes through GQGA strategy
Source: The test data processing result of learning outcome for each cycle

Data of improvement of natural science material mastery by using this GQGA strategy illustrates that students actively participate learning process. On the other side, students have been able to understand material being discussed, to make question not only conceptual, to express idea from one of the topics discussed, and to make simple conclusion based on observation during discussion process. Thus, implementation of GQGA strategy has an impact toward achievement of natural science value standard (KKM) at MIN 2 Bandar Lampung.

Analysis and Discussion

Based on the action result, as explained above, it is discovered, first the implementation of GQGA strategy can increase students’ learning liveliness, both viewed comprehensively and each indicator. Students’ learning liveliness has increased since the action of cycle I, II, to cycle III. Obtaining average percentage on aspect learning in natural science learning at class IV is 80.53% from cycle I to cycle III. The result of field note during research process is found “overall lesson taught is easily mastered by students. The discussion process is very pleasant among students, they have courage to ask question, express opinion smoothly without stuttering, and more confident to speak in front of their classmate” (CL.4 / MN-2/2019).

According to those facts, an illustration is obtained that aspect of students’ liveliness of natural science learning by implementing GQGA strategy relevant with principle of active learning. By interpretation, each student both individual and group is required to participate actively, ask each other questions, and can reveal idea and problem solving correctly. In this case, teacher’s creativity to facilitate students’ liveliness is needed, as according to (Fauzi & Suryadi, 2020) “The teacher has an important role to facilitate the students in building their knowledge and experience that guides them to achieve the expected learning goals”. The teacher must be able to create a learning situation where students will ask, answer, and express idea actively in learning process (Sinar, 2018: 6).

Through active learning, students will be able to get maximum result. On the contrary when students are passive, they have disposed to forget easily what has been given by teacher. By GQGA strategy, students have challenge to learn and work hard because they have to be active and independent in asking question, to express idea, and solve problem in learning. The process is parallel with the component of natural science learning according to Jack Holbrook “Science not only focus on the concept, but also provide direct experience in developing attitude, processes, and products or more broadly mastering scientific literacy” (Lestari & Rahmawati, 2020). According to his opinion, attitude aspect and process skill are important in learning natural science. However, there are things which must be considered in process of CQGA implementation. Teacher has to give attention attention and control intensively to student because of research result, especially in Cycle I, there are many students who play when
are formed into discussion group. As development theory, it is still reasonable because elementary school-age children still have basic needs such as self-actualization that tend to take action agree with their wish and to express themselves freely (Andesta, 2018). Therefore, the teacher must be able to control students’ behavior.

The second discovery, implementation of GQGA strategy in natural science learning at class IV by the theme “caring for environment, the various jobs, and my hero” can also improve students’ learning achievement when viewed from the data in cycle I to cycle III. The average percentage of learning outcome acquisition from cycle I to cycle III is 73%. So, implementation of GQGA strategy is able to improve learning outcome in accordance with KKM criteria for natural science subject in class IV. It is in line with the nature of GQGA strategy giving, receiving, and understanding material through cards, pairing information with each other, and measuring knowledge and mastering material based on partner cards (Said, 2016:78). Not only the high achievement of learning outcome mastery is determined by group leader’s success which is able to answer question and provide response, but also all group member is given the same opportunity.

In addition, this learning strategy contains game so that students feel happy and not bored when studying. The process of implementing this learning strategy involves many students in learning creativity such as writing, reading, listening, actively asking questions and responding and fostering mutual respect for others’ opinions so the students’ liveliness increases. Thus, learning naturally becomes active, interesting, and fun. The effect obtained from this learning process is to sharpen students’ social skill who can establish cooperation and exchange ideas both with teachers and between students. This fact is also relevant with the study result (Setiaji & Joko, 2013) which concludes that the GQGA strategy can significantly affect students' social skills.

Consistently, the GQGA strategy can improve students’ learning outcome in the various subjects from elementary school to high school. As a research finding of Kurino (2018) states that implementation of GQGA strategy was proven to improve mathematic learning outcome, Yulianti & Sahidu (2020) revealed that GQGA strategy had been shown to influence motivation and learning outcome, (Efendi & Siregar, 2018) proved GQGA strategy can improve students’ accounting learning outcome of vocational high school, (Aprianti & Edi, 2017) proved that GQGA strategy had an effect to students' chemistry learning outcome in high school, while (Indriyani et al., 2020) shown that GQGA strategy had been proven to improve students' learning communication. Therefore, through this research are generated new finding that not only GQGA strategy can be applied in high schools and affect to learning outcome, but also has been proven to be implemented in elementary schools and can improve students’ learning liveliness in natural science learning.

Based on above data findings, the development dimension of students’ learning liveliness in natural science subject using GQGA strategy more detail can be seen in this following table:

Table 1. Detail of of students' learning liveliness development through SGQGA

<table>
<thead>
<tr>
<th>Action</th>
<th>The aspect of learning liveliness</th>
<th>Average of improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cooperation</td>
<td>Expressing opinion</td>
</tr>
<tr>
<td>Cycle I</td>
<td>77.15%</td>
<td>68.36%</td>
</tr>
<tr>
<td>Cycle II</td>
<td>85.12%</td>
<td>83.26%</td>
</tr>
<tr>
<td>Cycle III</td>
<td>96.5%</td>
<td>89.24%</td>
</tr>
<tr>
<td>Rata-Rata</td>
<td>86.26%</td>
<td>80.28%</td>
</tr>
</tbody>
</table>

Source: Data processing result of each action, 2019
If seen from the accumulation of students' learning liveliness achievements by implementation of GQGA learning strategy in science subjects, on the cooperation aspect average of cycles I through III is 86.26%, expressing opinion aspect gained 80.28%, and problem solving aspect obtained average of 75.06%. The increase in average number of learning liveliness in those three aspects shows a positive change after taking action on natural science learning at class IV MIN 2 Bandar Lampung. It is relevance with the natural learning science purpose in elementary school (MI/SD) which is to develop students' skills including aspect of active participation in learning. Through active participation, it will certainly be able to help student to master science skills more easily at MI level. In these condition, students gain learning freedom which is a must in effective learning. Pratiwi, Nurhayati, Patimah, & Atikoh (2020) explained that “Independence can lead someone to become an active person and can do many beneficial things so that an independent person can achieve success”.

The fact of improving of students’ liveliness and learning outcome as aspect is also corroborated by the result of interview conducted by researchers to teacher and student, before and after taking action. As the statement from teacher class IV MIN 2 Bandar Lampung, as a research partner, that:

"...the implementation of GQGA strategy is very good, it can be seen during process of taking action which students are very enthusiastically. The majority of students are active, the emergence of collaboration between group friend, the courage to ask question, to express opinion or idea, so that interaction occurs between student and with teacher...

The same thing is also conveyed by student in class IV namely "...by learning like this, we are very happy, we can ask question with friend, work together and passionate by learning like this ...
" (W/PD/IV/MN-2/2019).

Based on all research data from interview result to teacher as a research partner, field note result, statement from students, observation, and document analysis as long as taking action can be concluded that after implementation of GQGA learning strategy has proved to be effective, it can be improve the students' liveliness and learning outcome in natural science learning in class IV MIN 2 Bandar Lampung.

**CONCLUSION**

The use of the Giving Question and Getting Answer (GQGA) strategy has proven to be effective to improve students’ learning liveliness and learning outcome in natural science learning as data of research result conducted in class IV MIN 2 Bandar Lampung. It is caused by attitude changes which occur to students during the learning process namely first, students can build cooperation in learning process; second, students are able to master material which has been delivered both from group member and from other groups; third, students are able to express question and provide response clearly; fourth, interactions occur between group member and with other group and with teacher during the discussion process; and fifth, students show psychological change as long as learning process as happy, active, and mastering the material. However, in the process of its application, the GQGA strategy also gives students room to play or to make noise because there is a grouping process of students and game. Therefore, the teacher has to give intense attention and control to student as long as learning because the student of elementary school level is hard to be consistent to follow the learning calmly.

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