Use of Varied Observation Methods With Word Square Lks In Improving Student's Understanding Of Animal Classification Materials

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ABSTRACT
Biology education emphasizes providing hands-on experience. Therefore, students need to be helped to develop a number of skills so that they explore and understand their surroundings and themselves. The fact that is often found in the field is Biology learning which is centered on the teacher as a knowledge provider for students, the delivery of subject matter tends to be dominated by the lecture method. Students are less active in the learning process to build and discover themselves through interaction with their environment, so students only memorize facts from books and not from the results of discovering and building their own knowledge.

INTRODUCTION
Teaching and learning activities in the classroom directly have an impact on improving the quality of school education. Therefore, teaching and learning activities need to get serious attention from every component of education, especially principals and teachers through planning adjustments that have been prepared with the activities carried out. However, what is more dominant in the management of teaching and learning activities is the teacher as the spearhead of the implementation of learning activities in the classroom who directly deal with students. Therefore, the success of education in various subjects is largely determined by the presence of teachers in managing classroom learning, including biology subjects.

Biology education emphasizes providing hands-on experience. Therefore, students need to be helped to develop a number of skills so that they are able to explore and understand the environment and themselves (Budimansyah, 2002). The fact that is often found in the field is Biology learning which is centered on the teacher as a knowledge provider for students, the delivery of subject matter tends to be dominated by the lecture method. Students are less active in the learning process to build and discover themselves through interaction with their environment, so students only memorize facts from books and not from the results of discovering and building their own knowledge.

Based on the results of an intensive study of learning patterns and students’ understanding, it is concluded that the learning process tends to be textbook oriented and not related to everyday life (Suhandini, 2003). Students have difficulty understanding academic concepts as taught so far, namely using something abstract with the lecture method.
Learning that is oriented to the target of mastery of the material is proven to be only able to lead students to remember the subject matter in a relatively short time, but often children do not understand and know in depth, the knowledge gained is only rote which causes children to easily forget, thus failing to equip children to solve problems for a long time (Nurhadi, 2002).

Based on the results of the initial reflection of learning in class X SMA Negeri 3 Luwuk, most of the learning atmosphere is still monotonous and student activity is lacking. For that we need an effort that can increase the effectiveness of student learning. This research was conducted in class XC because the characteristics of learning outcomes in Animal Classification material are still low.

The low student learning outcomes on Biology subjects, especially Animal Classification materials, is due to the low motivation of students to learn due to the lack of variety of learning models used so far. This is in accordance with the opinion of Sudjana (2001) which states that the right learning method can enhance the learning process of students in teaching which in turn can improve learning outcomes.

The use of the right method will make the learning process more effective because with the right method students will be able to understand the subject matter more easily. This is in accordance with the teacher's duties in the learning process, namely: (1) providing clear and meaningful information to students, (2) providing opportunities for students to find or apply their own ideas, (3) instilling awareness of learning and using their own learning strategies (Anni, 2004).

One of the efforts to improve learning outcomes is to using the observation method that is varied with Word Square worksheets. The advantage of the observation method is that students are involved in thinking so that students' emotions can be directly involved in the learning process, improve student skills through an activity, can observe a process/event by itself, so that it will enrich the experience and increase knowledge and arouse curiosity. LKS Word Square is one of the learning media in which there is an element of the game, so that children do not feel bored and can attract interest and increase student learning motivation. The advantages of Word Square worksheets are that they tend to explore students' knowledge and attract students' interest in using biology textbooks.

Based on the description above, Classroom Action Research will be conducted with the title formulation; The Use of Observation Methods with Word Square Worksheets in Improving Students' Understanding of Animal Classification Materials in Class XC SMA Negeri 3 Luwuk.

**LITERATURE REVIEW**

**Learning Outcomes**

Learning and teaching are two concepts that cannot be separated from each other. Learning refers to what a person must do as a subject who receives lessons (student goals), while teaching refers to what a teacher as a teacher must do. Learning is not an activity of memorizing and not remembering. Learning is a process marked by a change in a person. Changes as a result of the learning process can be shown in various forms such as changes in knowledge, understanding, attitudes and behavior, skills, abilities and abilities, reaction power, acceptance power, and other aspects that exist in individuals (Sudjana, 1990).
Learning outcomes in a contextual approach emphasize the process, namely all activities carried out by students in achieving learning objectives. Student grades are obtained from the appearance of students everyday when studying. Learning outcomes are measured in various ways, such as work processes, work results, performances, recordings, and tests. (Anonymous, 1993).

Howard Kysley In Sudjana (1990) divides three kinds of learning outcomes, namely (a) skills and habits, (b) knowledge and understanding, (c) attitudes and ideals. Each type of learning outcomes can be filled with materials that have been determined in the curriculum while Gagne divides five categories of learning outcomes, namely (a) verbal information, (b) intellectual skills, (c) cognitive strategies, (d) attitudes, and (e) motor skills.

According to Purwanto (1986) that learning outcomes can usually be known through evaluation activities that aim to obtain evidence data that will show the level of ability and success of students in achieving learning objectives. The learning outcomes achieved by students are influenced by two main factors, namely factors from within the student and factors that come from outside the student or environmental factors. Factors that come from students, especially their abilities. The student's ability factor has a huge influence on the learning outcomes achieved. As stated by Clark that students' learning outcomes in schools are 70% influenced by students' abilities and 30% are influenced by the environment. In addition to the ability of students, there are other factors such as learning motivation, interest and attention, attitudes and study habits, perseverance, socioeconomic, physical and psychological factors (Sudjana, 1990).

Implementation of the Observation Method on Animal Classification Materials

Method is a way to achieve something (Gulo, 2002). Observation means observation, careful review. While observing means observing carefully (Anonymous, 1989). In observing, one does not need to give treatment to the object under study. In practice, observation is divided into two, namely direct observation and indirect observation.

An observation is called direct observation if the observation is made directly on the original object, while indirect observation is if the observation is made on a schematic, chart, chart, or image or replica of the original object. The observation method in the teaching and learning process is defined as a way of teaching subject matter by inviting students to carefully observe an object (Winataputra, 1992). To get optimal learning outcomes, the observation method needs to be accompanied by discussion (Djakadisastra, 1982).

The advantages of the observation method according to Subiyanto (1990) are that students are involved in thinking so that students' emotions can be directly involved in the learning process, improve student skills through an activity, can observe a process/event by itself, so that it will enrich the experience and increase and arouse feelings want to know. With the observation method students will better understand something that is abstract and better able to remember in a relatively longer period of time.

Implementation of observation methods on Animal Classification materials includes observations of invertebrate and vertebrate animals, both with original objects, preserved specimens, and pictures; From these observations, classification/grouping of animals is then carried out, followed by making a key of determination using the dichotomy chart of the key of determination.
LKS Word square

According to Laurence Urdang (1968) Word Square is a set of words such that when arranged one beneath another in the form of a square the read a like horizontally below the other in a square and read horizontally and decrease. Word Square according to Hornby (1994) is a number of words that arranged so that the words can be read forwards and backwards.

LKS Word Square is one of the learning tools/media in the form of boxes a word that contains a set of letters. In the collection of letters contained concepts that must be found by students in accordance with the questions oriented to learning goals (Anonymous, 1991). Learning LKS Word Square contains questions that match the important meanings of a word concept or sub concept. The first question is a question whose answer is in the form of a key which in biology subjects often uses the term foreign. The second question must be related to the first question and is continuation of this definition. And so on, so that all questions already represents the concept to be studied. After that, students discuss to get the answer and find it in the Word Square boxes. On At the end of the lesson, students conclude the material that has been discussed, so that students gain a meaningful learning experience (Anonymous, 1991).

Word Square worksheets require basic knowledge from students so that Previously, students had to read the material/subject to be studied. Thus students will be trained to use source books and skilled in self-study. The steps for creating Word Square worksheets are as follows:

a. determine the topic according to the concept/subconcept
b. write down key words according to the goals to be achieved
c. rewrite key words starting with the longest words
d. make word square boxes
e. fill in the keywords in the word square box

According to Saptono (2003) the steps for learning Word square are:

a. students are directed to study certain topics that will be delivered
b. students are asked to find terms in word squares that are relevant to the topics that have been studied
c. Students provide an explanation of the words found. Information from students about the word as much as possible extracted by the teacher.
d. Student explanations varied with questions addressed to all students.

Animal Classification Material

The material for animal classification is presented in accordance with the Biology Syllabus of KTSP class X semester 1 (Odd). Based on the KTSP Biology Syllabus for the class X Biology subject for the subject matter of Animal Classification, it has a Competency Standard (SK) to understand the diversity of living things, and Basic Competence (KD) to classify living things based on their characteristics. The Animal Classification sub-material includes the classification of invertebrate and vertebrate animals and the use of simple determination keys. The main characteristic of the study of Animal Classification is that animals are so diverse that it requires a system to recognize and study them.

a. Purpose and benefits of classification

Classification is the placement of living things in groups or groups by considering the similarities and differences in the characteristics or characteristics that appear. Classification aims to simplify the various objects of study, making it easier to recognize
them. Classification is useful for recognizing various species of living things, kinship between living things, and interactions between living things and their environment.

b. Nomenclature System for Living Things

This scientific nomenclature was proposed by Carolus Linnaeus (1737)), a Botanist from Sweden with a dual nomenclature system (Binomial Nomenclature). This nomenclature uses Latin or Latinized, which is still used as scientific communication in the world.

c. Key of determination

The key of determination is a clue that can be used to determine the type of animal present in the environment. The key contains the characteristics of the animal whose class will be determined. Animals to be classified must be identified (discandra or described). Each feature that appears in the key of determination should be special, which is only owned by certain animals and not owned by other animals. In describing yes and no systems used.

RESEARCH METHODS

This action research was carried out in Class XC of SMA Negeri 3 Luwuk which was registered in the odd semester of the 2010/2011 academic year and the number of students who were subjected to action was 40 people consisting of 20 boys and 20 girls. Taking into account the initial results, the class has relatively low absorption in Biology subjects, especially in understanding and mastering Classification in Animals.

This classroom action research is designed to consist of two cycles. Each cycle is carried out in accordance with the changes to be achieved. Initial observations were made to determine the appropriate action to be given in order to improve student learning outcomes. From the results of the initial observations, it was determined in the reflection that the action used to improve students' understanding in learning Animal Classification was through the observation method which was varied with Word Square worksheets. Based on the initial reflection, this class action is carried out with the following procedures: planning, acting, observing and reflecting in each cycle.

The steps taken in each cycle are as follows:

1. Planning
   Planning in this stage includes activities to identify problems through initial observation, analysis of the causes of the problem and establishing a plan of action.

2. Action Implementation
   At this stage the teacher carries out learning activities for Animal Classification materials with the observation method that is varied with Word Square worksheets in accordance with the Learning Plan that has been prepared at the planning stage.

3. Observation
   The researcher observes the learning process, assesses the ability of teachers to manage and implement learning, and assesses the ability and process skills of students. For the successful implementation of the action in each cycle, a test is carried out on the material that has been taught which is given at the end of each cycle in the form of a written test. Furthermore, the class average is taken from the tests given to determine the increase in student outcomes.
4. Reflection

Reflection here includes activities: analysis, synthesis, interpretation, explaining and concluding. In this stage the results of observations are collected and analyzed by the researcher, so that the researcher can reflect on the theory about the success or failure of the actions taken for improvement in each subsequent cycle in order to achieve the final goal. It is hoped that after the end of the second cycle, from the presentation of the data it can be concluded that the observation method which is varied with the Word Square Worksheet on the Animal Classification material can improve the learning outcomes of students in class XC SMA Negeri 3 Luwuk.

RESEARCH RESULTS AND DISCUSSION

Learning Outcomes

Based on the results of data analysis, student learning outcomes during cycles I and II can be seen in Table 1 below.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Before Action</th>
<th>Cycle I</th>
<th>Cycle II</th>
</tr>
</thead>
<tbody>
<tr>
<td>The highest score</td>
<td>75</td>
<td>90</td>
<td>95</td>
</tr>
<tr>
<td>Lowest value</td>
<td>50</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>Average</td>
<td>58</td>
<td>69.63</td>
<td>76.38</td>
</tr>
<tr>
<td>Classical Completeness</td>
<td>65%</td>
<td>77.5%</td>
<td>87.5%</td>
</tr>
</tbody>
</table>

Student learning outcomes include class averages, individual learning mastery and classical learning completeness. The increase in students' understanding is strongly influenced by the activeness and involvement of students in learning. The activeness and involvement of students in the learning process is one of the factors supporting the success of learning. The results of the observation of the learning process in the first cycle showed an increase in the average value compared to before applying the observation method and Word square worksheets, also accompanied by an increase in classical student learning mastery of 12.5%. The increase in student learning outcomes from cycle I to cycle II indicates an increase in understanding of the material being studied. This fact is in accordance with the opinion of Dewey in Nurhadi (2004) which states that students learn well if they can actively construct their own understanding of what they are learning. Although learning outcomes in the first cycle increased, this increase was not optimal because it was not in accordance with the expected success indicators, namely students who scored 65 less than 85%.

The increase in student activity from cycle I to cycle II causes student learning outcomes in cycle II to increase. The increase in class average and the number of students who study thoroughly shows that students' understanding of the learning material increases. This fact is in accordance with the opinion of Nurhadi (2004) which states that students will learn well if they are actively involved in all activities in the classroom and have the opportunity to find out for themselves. This opinion is supported by Suparno in Sardiman (2005) which states that learning outcomes are influenced by the experience of the subject of learning with the physical world and its environment. Learning with the observation method and Word square worksheets has several advantages. The advantage of the observation method is that students are involved in thinking so that students' emotions can be directly involved in the learning process, improve student skills through
an activity, can observe a process/event by itself, so that it will enrich the experience and enhance and increase curiosity. Students will better understand something that is abstract and better able to remember in a relatively longer period of time. The advantages of Word Square worksheets are that they tend to explore students’ knowledge and attract students' interest in using biology textbooks. This shows that students who are taught using the observation method which is varied with the Word Square worksheet have a significant increase in learning outcomes.

Students need to be accustomed to solving problems, finding something useful for themselves so that they are expected to produce in-depth knowledge bases where students will be able to solve problems in their learning. This is in accordance with Suparno's opinion in Sardiman (2005) which states that learning means seeking meaning. Meaning is created by students from what they see, hear, feel, and experience. In learning the observation method, students learn to solve problems through LPS and LDS.

The teaching and learning process during cycle II still has shortcomings. Constraints faced are from within students, namely psychological factors. This can be overcome by skilled teachers in motivating and fostering a pleasant learning atmosphere. Classical learning completeness in cycle II has exceeded 85%, this means that the performance indicator for increasing the percentage of students who get 65 or the number of students who study thoroughly increases to 85% has been achieved.

**Student Activity**

The results of the assessment of student activity during cycles I-II are summarized in Table 2 below.

<table>
<thead>
<tr>
<th>Activity Level Category</th>
<th>Cycle I</th>
<th>Cycle I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall</td>
<td>42.5%</td>
<td>62.5%</td>
</tr>
<tr>
<td>Currently</td>
<td>37.5%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Low</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>Classical Activity</td>
<td>61.25%</td>
<td>76.25%</td>
</tr>
</tbody>
</table>

Based on Table 2 above, it appears that the application of the observation method which is varied with Word Square worksheets can increase student activity. In the first cycle, student activity was not optimal, as evidenced by the low category activity reaching 20%. This is because students who are active in learning are not evenly distributed, only certain students are already active in learning. Namely students who are used to being active before the implementation of learning with the observation method which is varied with the LKS Word Square acquisition.

The activity achieved in the first cycle occurs because students are actively involved in the learning process through observation/observation and discussion activities. In observation activities, students observe directly through preserved specimens/preparations and indirectly through pictures from the internet and source books. While in the discussion activities, students worked on LPS, LDS, and LKS Word square. Learning activities using media like this will increase student motivation and learning outcomes. The use of learning media causes the teaching and learning process to be interesting, can foster student interest in receiving lessons and can be applied in various
learning approaches. This is in accordance with what Sudjana (2001) said, that teaching media can enhance the student's learning process which is expected to enhance the learning outcomes achieved. The learning activities were continued with class discussion through group representative presentations.

Students who have not been active in learning are thought to be because they are not familiar with learning activities through observation and discussion, are less interested in discussion activities, lack courage in expressing opinions/presentations, and are still unable to answer questions or ask teachers or friends. During the discussion, the students were very busy, so the teacher had to warn the students many times. The crowd that occurs because there are more students having fun with friends instead of working and discussing in groups. This resulted in when sharing in front of the class, only one group presented the results of their group discussion because it was appointed by the teacher, resulting in less effective use of time. This is in accordance with Slavin's opinion in Kauchak (1998) which states that there are problems that teachers will face when implementing collaborative learning strategies in the classroom, namely being crowded, failing to get to know each other, wrong behavior, and ineffective use of time. Ineffective use of time by students occurs because students are joking and playing alone. This also happens because teachers are less skilled at motivating and facilitating students. Based on the reflection in the first cycle, it was found that there were deficiencies in students, namely the lack of activeness of students during the learning process. This deficiency can be corrected by the way students have to better understand learning activities through observation and word square worksheets, students must try to be more active in the learning process so that they can adjust to what the teacher wants, as well as teachers must be better able to manage the class and motivate students better.

In the second cycle, the level of student activity increased. Students who are active in learning are almost evenly distributed. Students are more active and serious in conducting discussions. Students work together in groups through observation, either directly with preserved preparations or indirectly with pictures so that students build their knowledge more quickly and understand the concepts they learn more easily. The same thing was stated by John Dewey in Nurhadi (2004) that students learn well if they can actively construct their own understanding of what is being learned. In this second cycle the success of increasing the percentage of students who are actively involved in the learning process has been achieved. This is evidenced by the activeness of students in the high activity level category increased by 20% from 42.5% to 62.5%, the low activity level decreased by 10% from 20% to 10%, while the moderate activity level remained. Overall, student activity in the learning process increased from cycle I.

Teacher Performance

Based on observation data, the activities carried out by the teacher during learning are grouped into teacher activities in preparation (opening the lesson, conveying lesson objectives, checking student attendance, and conducting student apperception and motivation), carrying out core activities (mastering the material, inviting students to make observations, asking questions), distribute LPS and LDS, guide students to discuss, conduct class discussions, manage the class), and cover (conclude the material, give student assignments and close the lesson). Assessment of teacher performance during learning
going on average well. Teacher performance results during the learning process summarized in Table 3 below.

Table 3. Teacher Performance Results During the Learning Process

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Cycle I</th>
<th>Cycle II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>11.11%</td>
<td>22.22%</td>
</tr>
<tr>
<td>Core activities</td>
<td>44.44%</td>
<td>55.56%</td>
</tr>
<tr>
<td>Closing</td>
<td>16.67%</td>
<td>16.67%</td>
</tr>
<tr>
<td>Amount</td>
<td>72.22%</td>
<td>94.45%</td>
</tr>
</tbody>
</table>

Increased activity and student learning outcomes can not be separated from the role of the teacher. The teacher's role in the learning process is one of the factors that influence student learning outcomes. This is in accordance with the opinion of Sardiman (2005) which states that teacher creativity is also absolutely necessary in order to be able to plan student activities which vary greatly. In the first cycle, the teacher's performance of 72.22% was classified as good, although not yet fully skilled in managing learning.

In the first cycle of learning the teacher has not conveyed the indicators or learning objectives that must be achieved by students, even though by knowing the learning objectives students will have an idea of what things will be learned. Teachers are less able to foster interaction between students so that in conducting observations and discussions students tend to be less active. The teacher also does not provide guidance during student discussions. This is because the teacher only goes around to each group once and the communication that occurs is very short. In addition, the teacher is also less able to condition the class so that the atmosphere during the discussion is quite noisy. From some of the shortcomings made by the teacher in the first cycle, the teacher also has advantages that are seen during the learning process, namely the teacher is good at preparing tools and materials, doing apperception, guiding students to make observations/observations, distributing LPS and LDS, dividing students into several groups, evaluate learning outcomes, give awards to groups, conclude the subject matter, and close the lesson.

In the learning process the teacher provides the widest opportunity for students to build concepts, ask questions, answer questions, express opinions, and provide responses. The teacher continues to motivate students in each cycle and guides students in learning by going around each group and helping groups who have difficulty in learning activities. The teacher also interacts with students and tries to make the class atmosphere more pleasant, namely by making the atmosphere less tense. LKS Word square is one way to make the learning atmosphere more fun because it contains elements of the game. The teacher also invites students to always link the material being studied with real life and always think in an integrated manner. During learning, the teacher always activates students and becomes a facilitator in learning activities.

In cycle II the teacher has clearly stated the learning objectives and the indicator of increasing the percentage of teacher performance in the learning process to 85% has been achieved. The success of the increased teacher performance causes an increase in learning activity and motivation, this results in increased student learning outcomes. Through observation, discussion, and word worksheets square creates fun and meaningful learning for students, because students find the knowledge they learn for themselves. It fits
with the opinion of Nurhadi (2004) which states that learning will be more meaningful if children 'experience' what they learn for themselves, not just 'know'. Improving teacher performance and student activity can affect student success in learning. This is in accordance with the opinion of Nurhadi (2004) which states that the teacher acts as a mediator and facilitator to help optimize student learning. Nurhadi's opinion is supported by Sardiman (2005) that the teacher's role in learning includes informants, motivators, mediators, and facilitators.

Student Responses to Learning by Applying the Observation Method which was varied with Word Square worksheets

Student responses are needed to get feedback on the learning process through the observation method which is varied with Word Square worksheets. This overall response increased each cycle. Student responses to the learning process that has been carried out during cycles I-II are summarized in Table 4 below.

Table 4. Summary of Student Responses to the Learning Process During Cycles I-II

<table>
<thead>
<tr>
<th>No</th>
<th>Student Opinion</th>
<th>Cycle I</th>
<th>Cycle II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I like biology</td>
<td>Yes 55%</td>
<td>Not 45%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes 82.5%</td>
<td>Not 17.5%</td>
</tr>
<tr>
<td>2</td>
<td>Like it when learning biology is supported by learning media</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>92.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>3</td>
<td>With the observation method and word square worksheets, you can better understand the animal classification material</td>
<td>47.5%</td>
<td>52.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>4</td>
<td>With the observation method and word square worksheets, it can be more motivating to learn</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>5</td>
<td>Interested in the learning strategies delivered by the teacher</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>77.5%</td>
<td>12.5%</td>
</tr>
<tr>
<td>6</td>
<td>Actively participate in teaching and learning activities</td>
<td>52.5%</td>
<td>47.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>7</td>
<td>Like the atmosphere of teaching and learning activities now</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>8</td>
<td>Do not experience difficulties in teaching and learning activities that have taken place</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>9</td>
<td>The average student interest in learning biology using the observation method and word square worksheets</td>
<td>60.63%</td>
<td>39.38%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>83.44%</td>
<td>15.31%</td>
</tr>
</tbody>
</table>

In the first cycle as many as 24 students were interested in learning through the observation method which was varied with the word square worksheet. Students reasoned that learning using the observation method and word square worksheets can make the subject matter easier to understand and more fun so that they are more motivated to learn. Learning with the method of observation and word square worksheets that are applied also makes it easier for students to understand the material. This is because the material discussed is concrete so that it can be remembered longer. Based on the observer's observations, although there are still many students who are not actively involved in the learning process, students have started to like the atmosphere of the class now. However, in group performance there is still a lack of seriousness in working in groups because
there are still group members who are joking or playing alone. Students already know that performance and test results will be assessed but in the first cycle students are still less motivated in learning because they are not familiar with learning the observation method and word square worksheets and lack of motivation from the teacher.

In this second cycle, only 9% of students were not interested in taking part in the learning that took place because it made the class atmosphere crowded, while other students thought that learning through the application of the observation method and word square worksheets was more interesting because the learning atmosphere was fun. This is evidenced by the results of the questionnaire that students understand the material easier, are more motivated to learn, can increase their activity, and like the atmosphere of the class now. Student involvement in learning is increasing, many students have the courage to ask questions, express opinions, answer questions and respond to opinions.

In cycle II students have felt the benefits of group work from discussions on the observation method and word square worksheets. Students become easier to learn, more familiar with the concepts being studied, and more active. If students do not understand, they can directly ask their friends in the group. This is in accordance with the student questionnaire in the second cycle, 90% of students stated that learning with the observation method was varied with the word worksheet. square is more fun because it can be learned more concretely through real specimens and pictures. The observation method emphasizes learning activities that are associated with real-world situations so that they can open up diverse thinking insights from all students. Students who have high academic abilities act as tutors for their friends who have lower academic abilities.

The obstacles encountered in this study were crowds during observations because they were busy walking around to other groups to see preparations that were not available in the group. In addition, there is a lack of time provided for students to fill out questionnaires on student responses to learning by applying the observation method that is varied with Word Square worksheets so as to reduce the break time to fill out the questionnaire.

CONCLUSION
Based on the results of the research and discussion that have been described, it can be concluded that through the observation method that was varied with the Word square worksheet on the Animal Classification material in class XC SMA Negeri 3 Luwuk, student activity and motivation as well as good teacher performance, this can improve learning outcomes. students from the average class 69.63 to 76.38 with classical completeness 77.5% to 87.5%.

REFERENCES
Science Instructors.
________2006. Education Unit Level Curriculum. Bandung: PT. TeenRosdakarya