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The Effort to Raise Students' Knowledge and Comprehension in the Learning Activity by Advanced Teachers

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Abstract-The objects of observation were advanced teachers in the effort of raising students' knowledge and comprehension through learning activities. The approach was descriptive method. The basic of description came from the instruments used to collect the data such as questionnaires. There were seven statements in the questionnaires as the base of data analysis materials in this article. The observation samples were 180 teachers spread in two parts; 54 teachers teaching in Pekanbaru City and 54 teachers teaching in Kampar Regency. Samples selection was done randomly. The analysis results give information that teachers' orientation in doing the treatment is at average 4,15 with very high category. As an important note in the effort of raising students' knowledge and comprehension, it is known that there are three treatments that teachers' level of intensity is lack in there such as making the students curios by presenting current issue, making a map of concepts as the knowledge framework, and relate the problem empirically and realistically compared to utilizing prior knowledge for building the next knowledge, encouraging the students to dig information through contemplation, inviting the students to look at what the teachers and their friends do productively. Professional teachers will try to take the students to have more knowledge and comprehension. Each teacher has their own way in accordance with the level of their knowledge and experience. However, overall the teachers do excellent treatment towards the students as the effort of raising students' knowledge and comprehension.

Keywords: knowledge, learning, students, teacher

1. Introduction

Learning is a process to improve comprehension and expand knowledge. As a teacher, asking the students to always study is not enough, there must also an effort so they can experience a good learning activity. When seeing the education regulations, there are many tasks for teacher in the learning activity. The task is teaching. Teaching activity is an activity to transfer knowledge. Knowledge is everything that is already known. With the existence of knowledge, the comprehension can be developed. Knowledge is also the fruit of information which can help the person.

In the learning activity, knowledge or information is not always coming from the teachers, but teachers have to prepare themselves so they can help students in grasping the knowledge. The students can share comprehension and knowledge so it will be formed wide information system. Teachers with their various skills can facilitate the students to have a good knowledge and comprehension. The wider the students' knowledge, the more ways come to them to express their own ideas.

In this case, teachers can do some efforts to encourage students' knowledge and comprehension in learning. These efforts bring positive impact to the learning quality and quantity of the students. Such as a teacher invites the students to reflect to anything that happens during their way to the school, even in the relation of the situation of the street in the morning, traffic, public or private transportation. All

of these are encouraging the critical thinking so it is triggering knowledge and comprehension toward a problem.

A teacher has to be able to guarantee themselves to have a good knowledge so they can guide students way of thinking and comprehension toward a problem. It is very common Mustafa and Zulhafizh (2017) stated that in order to balance the students, so the teachers have to get information. Besides, the students can criticize a problem that is already shared. The more critical the students in responding those problems it can lead into a critical learning also. This is an action in order to develop students' knowledge and comprehension.

Encouragement from the teacher as a facilitator is very important to lead the students to gain more knowledge. Zulhafizh, Atmazaki, and Syahrul (2013) stated if the students already have good attitude and motivation, the teachers have less difficulties in stimulating the students. They can gain knowledge by their own by understanding every problems through their knowledge. Inviting students to dig the knowledge deeper is important, especially when they directly experience it so their knowledge is uncontested.

Mustafa, Hermandra, and Zulhafizh (2018) stated that teachers have to invite the students to always reason and improving knowledge also their skills. Which means a teacher has to be able to give assurance to the students so after they learn, they can get new experience. This experience leads them to be better, creative, and critical. Kamamia, Ngugi, and Thinguri (2014) stated that knowledge and comprehension which is got as the impact of learning can enrich students' point of view. Which means, the higher the students' knowledge and comprehension, the more the students can improve their quality and quantity, it can also give positive impact.

2. Methodology

This study used descriptive action. The basis of the description was attached to the instrument used for data collection which was questionnaire. In this questionnaire, there are seven statements as the basis source of analysis in this article. This questionnaire invites teachers to give response in order to raise students knowledge and understanding in the learning activity. This questionnaire was given to the teachers who taught in a senior high school in Pekanbaru and Kampar.

The samples of the study were 108 teachers which were divided into two groups, which are 54 teachers who taught in Pekanbaru and 54 teachers who taught in Kampar. The sample collection used random sampling. Then, the data analysis was conducted by observing and analysing questionnaire items by the teachers. This strategy was a step to find out the response and idea of the related teachers in order to raise students knowledge and comprehension in the learning activity, especially in the school where they taught. Then the analysis process was conducted with SPSS version 21 and *microsoft excel* programs.

3. Result and Discussion

Teachers have to strive for the best learning result for students whom they teach and educate. Learning can be failed when the students do not get the knowledge and comprehension after the learning process has done. As a manager, teachers can do some actions which can lead the students to get some knowledges and comprehensions for the problem. Such as encouraging students to dig information in the learning process through reflection, making the students curious toward some problems by raising

up the current issues, making a concept-mapping of the material which will be discussed as a knowledge framework, utilizing the previous knowledge to build the further knowledge, inviting students to observe environment productively such as what the teacher and the other student has done so that it can trigger some ideas, formulating some questions to trigger students reasoning skills in comprehending ideas, and relating empirically and realistically on some problems. The result of analysis distribution can be seen in Figure 1.

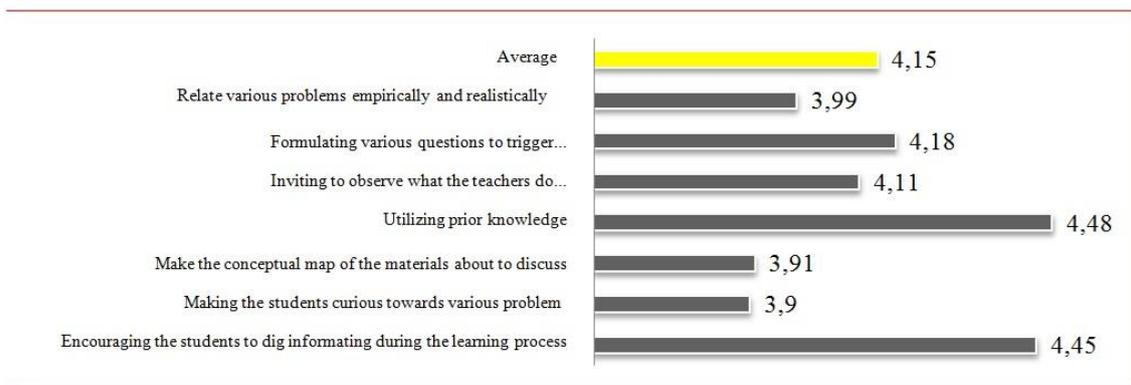


Figure 1. The Average of Effort to Raise Students Knowledge and Comprehension

3.1. Encouraging Students to Dig Information Through Reflection

On figure 1, it can be seen the activity of the teacher in encouraging the students to dig information through reflection activity in the average of 4,45 that is considered as very high category. Generally, the teachers invite the student into reflection to improve or stimulating students knowledge and comprehension. This reflection result can give a picture of their insight or information. For a teacher, it is important to know first about the quality of their student insight. With this way, they could take some creative actions to help or even improving their students knowledge and comprehension.

Mustafa, Hermandra, and Zulhafizh (2018) stated that the information that the students have is a support for some activities which are conducted by the teacher in the learning activity. The teachers have to guide the students to find out their knowledge and comprehension toward a problem. This reflection activity is a strategy to improve students reasoning skills so it can create values of critical thinking. On the other hand, it can help the students to give feedback to some experiences they have been through.

In line with the explanation above, Paolini (2015) stated that teachers can lead the students to look for and dig information through scientific reflection to get true conclusion. The truth got will become a meaningful knowledge for the students and also the teachers. Kratzer (1990) reminded that teacher must be there after reflection activity to filter, make assurance that the information is grasped and understood well by the student.

3.2. Making the Students Curious by Raising Up Current Issues

On figure 1, it can be seen that the teachers activity to make the student curious by raising up current issues in order to improve students' knowledge and comprehension in the average of 3,90 which considered as high category. This context shows the teachers are not always successful in making the students curious by raising up current issues. However, the teachers are still trying to stimulate the students to dig their insight.

In creating curiosity, teachers must invite the students to explore or observing something so there will be some empirical and realistic experience. This effort has done to encourage the students to get or learn more knowledge. The higher the curiosity and effort, the higher potential they will get in the context of knowledge and experience. The students who have more knowledge are tended to be more ready in facing problems.

The curiosity of the students which is designed by the teachers is an action to open their mind. Rauterberg (1995) stated that curiosity is a gap in guiding and developing knowledge. Which means in order to raise knowledge and comprehension can be done by making the students to be curious. Furthermore, curiosity happens due to some stimulation or sensory sensation, knowledge skills which demand to get knowledge, clearance or specific toward something they look for, also look for renewal and challenge. If this condition is felt by the students, then they will explore with their curiosity.

3.3. Making a Concept-Mapping to the Material Which Will be Discussed as Knowledge Framework

In figure 1, it is seen the activity of teachers in making concept-mapping to the material which will be discussed as knowledge framework is in the average of 3,91 which is considered as high category. This context shows the teacher are not always making concept-mapping to the material which will be discussed in the learning activity. However, the teachers are still trying to give their best for the students to get good knowledge and comprehension in the learning process.

This concept-mapping is encouraging the students to study and independently or in group searching for knowledge. These matters are depended on the learning strategy that is designed by the teachers. In principle, it is inviting the students to find out in order to raise knowledge and also forming their own skills. In this context, teachers have to give direction and guidance so the students can find the meaning expected.

Lubberts (2009) stated that the presentation of concept-mapping is an effort to form students' knowledge structure in hierarchy. Generally, the process of arranging the components in general will then be completed with some specific matters. This way means to make students able to implement systematic way of thinking. Lubberts research result shows the utilization of concept-mapping in the learning activity is very helpful for students for making concept of knowledge or information verbally. This matter is very helpful for expanding students' knowledge and comprehension.

3.4. Leveraging previous knowledge to build further knowledge

In figure 1 visible teacher activity in utilizing previous knowledge to build the next knowledge is on average 4.48 with a very high category. In this context it is very clear that the teachers always stimulus the students to learn well at a later stage. Simple clipping can be done to open the student's horizons. Providing illustrations can help repeat the previous knowledge. In the framework of the design of the show, at the beginning of the activity teachers do *brainstorming* with the intention of inviting students to to remember back the material that has been past. It is important to maintain the stability of knowledge and understanding of students.

Yuksel (2012) explain the teacher should be able to reactivate previous knowledge that has been owned by the students. Guastello, Beasley, and Sinatra (2000) Among the ways teachers can do is to provide simple questions or to provide a concept map. These efforts directly or indirectly may provide signals about current and previous knowledge associations.

Lin, Lin, and Huang (2011) utilization of questions or concept maps designed by teachers to help diagnose students' knowledge and understanding. Students can rethink about the things he had learned before. This encourages students to keep learning well without forgetting previous knowledge and understanding. Sometimes, students have difficulty understanding the next issue if they do not remember previous knowledge and understanding. That's why teachers need to generate knowledge and understanding of students both short-term and long-term.

3.5. Inviting students to take a closer look at teachers and their friends

In figure 1 the teacher's activities are seen inviting students to take a look at what teachers and their friends are earning on an average of 4.11 with very high categories. In this context the teachers always try to invite their students to observe the various problems and phenomena that occur to generate knowledge and understanding. Active students can deliver them to an insightful student.

Teachers should be able to keep students' condition during their learning activities. If teachers are off guard, it is possible that many unproductive activities happen. Productive activities in an effort to realize a meaningful and comprehensive learning system. This is meaningless during learning to discuss materials only, but all illustrations, comparisons, lead students to awaken and develop their knowledge. If the teacher has to joke, then the action is not excessive. It is to avoid the loss of memory and thought or reason of the students.

Brown, Collins, and Duguid (1989) teachers need to perform productive activities for their students not taking off from the primary purpose of learning. This helps keep the content you learn to keep in mind by students. In practice-based learning, teachers must guide and keep control of their students so that the activities that are done are truly oriented towards the knowledge and achievement of learning objectives..

Intitutte for productive learning in Europe (2016) explains that when a teacher wants to shake the activities that are done to stay productive, then a teacher should also think about three important things, namely students, culture, and social conditions. These three sections contribute to each other in the teacher's efforts to maintain the stability of learning. If one of them is not in line, then the other part is affected. Therefore, it is necessary to balance the three components.

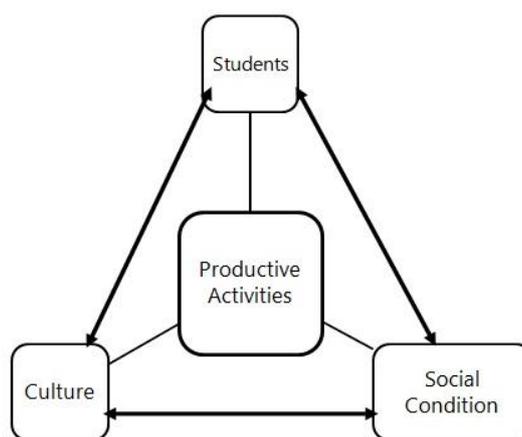


Figure 2. Relationships of productive learning components

3.6. Formulating various questions for triggering student's reasoning ability

In Figure 1 the teacher's activity is formulating various questions to lure instinctible students in the deeper ideat on average of 4.18 with very high categories. In this context teachers always try to fish and nurture their students through productive questions, encouraging them to think critically and creatively in order to get the right and appropriate answers. If the student's answers do not appropriately also give no negative consequences to the student's learning quality. Students have shown the best thing they can do.

The ability of the teacher to lure students through questions to become knowledge development efforts is crucial. Teachers should be able to organize and manage questions in order to develop themselves. Barnes (1990) a question plays an important role in fishing the participation of students. Questions become a part that can build the creativity of the students, what will be created and developed. It is further explained that the simple question of the student's logical opener. Barnes describes a variety of questions that will create a diversity of participation as an effort to generate knowledge and understanding.

Questions are capable of making students think. The more critical the question, then there is a demand for students to answer and think critically with a variety of knowledge or experience. Chaudron (1988) suggests that teachers should be able to help students to awaken their knowledge and develop their instinct reasoning through questions. Questions may be critical or non-critical because questions are a reference for students to provide answers.

3.7. Connecting Problems Empirically and Realistically

When conducting learning with students, teachers do not adequately convey the material that has been arranged in the curriculum. A teacher must provide assistance by material with real examples in class. Sometimes, not all students can understand the material well. Students are quick to understand when faced with concrete examples. In order to provide an example, the teacher must learn and know in advance the material to be discussed is no exception to the experience and its insights.

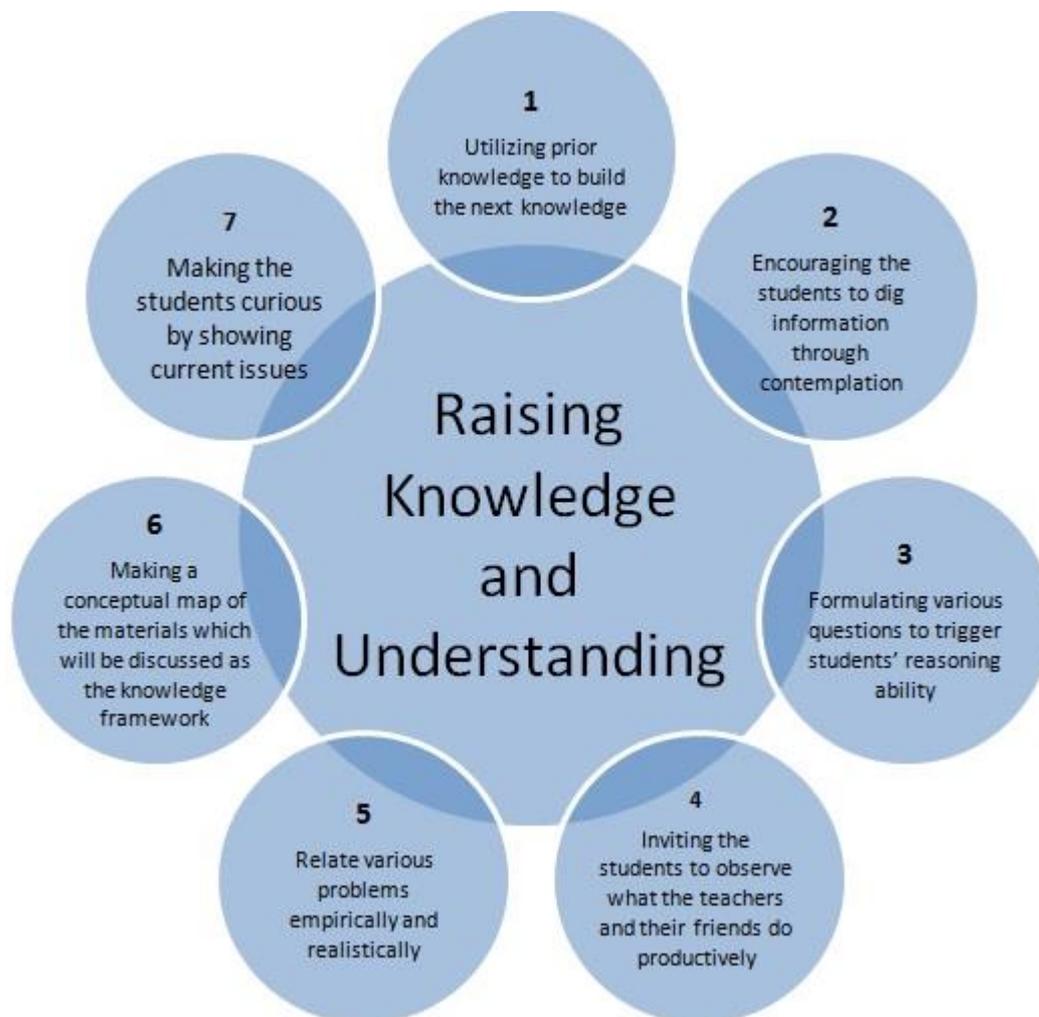
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In that way, students can be more quickly understood and able to match the problems that exist. It also directs the students seeking and discovering existing symptoms so that there is an attempt to dig existing knowledge. This effort is a strategy to build and develop student insights and experiences. Students who have knowing the fact that in the field makes it more confident of the knowledge it has. Students also want to receive the information that his teacher.

Mustafa, Hermandra, dan Zulhafizh (2019) in other cases, the teacher's failure or delay in providing information or examples can interfere with the learning atmosphere. No wonder about the students ' anxiety and lead to the fray. A teacher should be able to anticipate the situation to remain communicative learning. It is as an act to maintain the professionalism of teachers in carrying out their duties.

Further, based on the results of the analysis with the average approach known efforts to awaken knowledge and understanding of students in the learning activities by the top level teachers are at an

average of 4.15 with a very high category. Judging from the teacher's orientation aspect in realizing students' knowledge and understanding, it can be seen in picture 3.



4. Conclusion

In fact there are many ways teachers can generate knowledge and understanding of students in learning activities. Among the things that can be done is to strive to utilize the previous knowledge to build the next knowledge, encourage students to dig through contemplation, invite students to look at the teachers and their friends productive, linking various and realistic issues, creating a map of material concepts that will be discussed as a framework of knowledge, and making students curious about the latest issues. Teacher orientation performs actions offered on average of 4.15 with very high categories.

Professional teachers will strive to deliver their students to be able to have more knowledge than they have. Each teacher has each way according to their level of knowledge and experience. As an important record in the effort to generate knowledge and understanding of students, there are three actions that each belong to less level of the intensity of the teacher's role such as curious by raising the

current issue, creating a concept map As a framework of knowledge, and attribute the issue empirically and realistically. Nevertheless, overall the teachers did an excellent treatment.

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