

FOOD NUTRITION TEST FOR FULLDAY CLASS STUDENTS THROUGH LESSON STUDY At MTs MUHAMMADIYAH BATANG

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Abstract: Nutrients are needed by the body of living things, including humans. Humans need nutrition as a source of energy to survive. Among the nutrients needed by humans as a source of energy are carbohydrate and fat. To prove the content of carbohydrate and fat, it is necessary to nutritional test with the aim of providing experience for students to find out the nutritional content of the food they consume every day, especially carbohydrate and fat. The Food Nutrition Test is carried out using a qualitative descriptive method with the objects are bread, potato, carrot, cucumber, corn, butter, coconut milk, cheese and candlenut. Carbohydrate testing is by dripping Betadine and fat test by lubricating food to opaque paper. The subjects of this Food Nutrition Test are the students of MTs Muhammadiyah Batang Fullday School. Concept lesson study is applied in this activity. The results of nutrition test shows the foods that is consumed by students of MTs Muhammadiyah Batang Fullday School everyday which contain carbohydrates are rice, potatoes, corn and cassava. Foods that contain carbohydrates when dropped with betadine will change blue-black. As for foods which contain fat, they are applied with opaque paper, they will indicate the oil marks on the paper. These foods include butter, cheese, coconut milk and candlenut.

Keywords: lesson study, carbohydrate and fat nutrition test

INTRODUCTION

Food is the main source of energy for humans. Without food, it is impossible for humans to survive. The human body requires various nutrients to balance the metabolism.. Lack of nutrients for the human body will influence of human life and ultimately will make the organs do not work optimally. Inadequate function of the body's organs will make the body weak and even make humans die.. Lack of nutrition is influenced by various factors. One of the most influential factors is the economic issue. Economic condition of a person will change the dietary habit. Even they careless with nutritional content of their food. That will make nutritional imbalance.

Another thing that affects nutrition is the taste factor. Sometimes when people are hungry, they choose food without consider at the nutritional value. Whereas the nutrients in the food we really needed to support energy and materials for growth, development and to replace damaged cells. Our bodies in daily life need seven types of nutrients in order to keep healthy. The seven types of nutrients are, carbohydrate, protein, fat, mineral, vitamin, fiber and water. Adequate nutritional content will make our bodies healthy and our brains smarter.

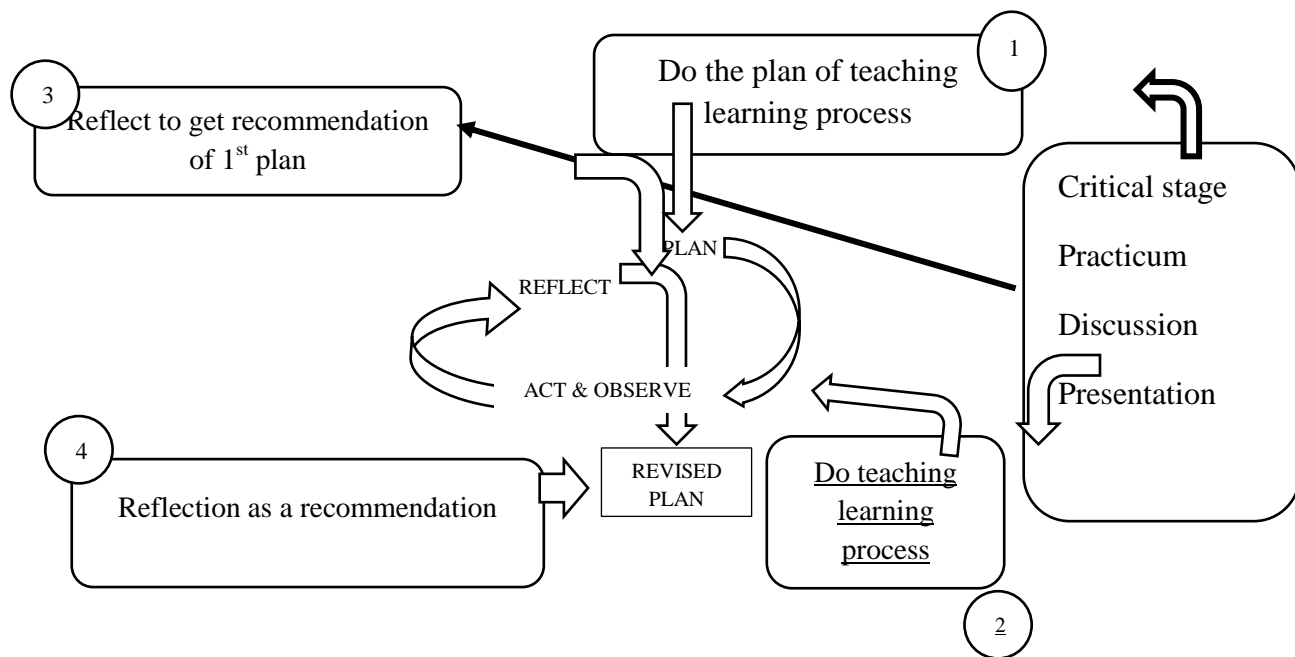
In day life, students do a lot of activities. Most of the activities of students require a lot of food that contains some nutrients. Every student usually has breakfast with food that contains carbohydrate, protein and fat. At noon, students also need food that contains more carbohydrate and fat because students do a lot of activities which deplete energy. Eating a lot of foods that contain carbohydrates will be fully faster and food that contain fat are also more preferred by students because they are more delicious, such as corn fritter, fried tofu, cheese bread, and others.

In this occasion, the science teacher model teaches class VIII about the Food Nutrition Test that is often consumed by students of MTs Muhammadiyah Batang Fullday School through lesson study.

Lesson study concept involves a team where involve teacher model, observer teachers and students. With this lesson study concept, it is expected teaching learning process will be better.

METHOD

This research was conducted at MTs Muhammadiyah Batang with the target of class VIII students at MTs Muhammadiyah Batang. This research method uses descriptive qualitative. Data collection techniques through documentation, discussion, and observation. Observers in this study were science teachers at MTs Muhammadiyah Batang, and mathematics teachers at MTs Muhammadiyah Batang. Assessment is more directed at changing the behavior of MTs Muhammadiyah Batang Student.



DISCUSSION

This article was conducted at MTs Muhammadiyah Batang, Batang Regency, Central Java. This Lesson Study activity was attended by a science subject model teacher, a science subject observer teacher and a mathematics observer teacher. This discussion will analyze the stages of Lesson Study implementation consisting of planning (plan), implementation (do), reflection (see). The analysis is more directed at changing the behavior of students.

1. PLAN

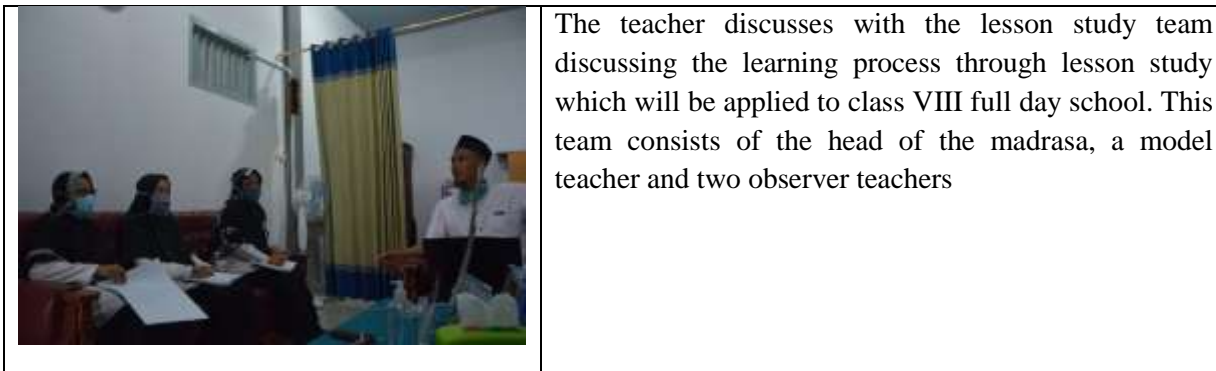
Planning activities begin with determining the science subject matter that will be delivered to students. The science material selected for Lesson Study learning is the result of a discussion from the Lesson Study Team consisting of the madrasa principal, model teacher and two observer teachers. Lesson Study itself is a learning model that strives for the process of teaching and learning activities to develop in a better direction in a cooperative way (cooperation) carried out by the teacher.

At this initial stage, the teacher shares the model with the principal and two observer teachers regarding activities in the science learning process, especially the Food Nutrition Test material. After sharing, determining the science material that will be delivered in the learning process, then the model teacher prepares everything that will be used in the learning process, so that the learning process can run well and interestingly. Things to be prepared include:

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- a. The teacher makes LKPD. The purpose of making LKPD is to make it easier for students to interact with the material provided, and to train students' independence
- b. Prepare learning media in the form of PPT with the aim of presenting learning materials more interesting
- c. Prepare some equipment and materials for practicum
- d. Preparing Assessment Instruments

A more detailed discussion of the plan



- a. Discussion about the selection of interesting science materials for the learning process. The material taken is closely related to everyday life (contextual). Where the material used is IPA class VIII Food Nutrition Test. The model teacher gets advice and direction from the team about the steps of learning.
- b. Discussion about the selection of models and media to be used in the learning process. Finally, from the discussion, it was agreed to use the discovery learning model as a learning model and the media in the form of PPT.
- c. With this lesson study team discussion, it turned out to be able to increase the insight and knowledge of each teacher, strengthen each other and find new things.


2. DO

The learning process carried out at MTs Muhammadiyah Batang, especially in class VIII. The science model teacher is tasked with teaching, a science observer teacher and a mathematics observer teacher. Here the observer teacher is tasked with observing and recording things that happen, especially observing the behavior of students during the learning process, the criticality of students in answering and asking questions, the activity of students and things that stand out from students and others. The results of these observations and notes are used as the success of learning and evaluation for future learning.


Learning activities begin with apperception which is done by asking questions and giving a case. In the core activity of students, namely the food test practicum. In this case the attitude of the child in the practical stage is assessed. If the practicum process goes well and the results of the practicum are also right, then the collaborative process in learning between students and teachers is successful. During the learning process there are activities carried out by teachers and students. Below is a description of the activities of the learning process

- a. Initial Activities

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	<p>During the apperception activity, the model teacher presented PPT and some questions about "what is nutrition?" Nikita answers questions about foods that contain nutrients. On the other hand, Fariz expressed his opinion "foods containing vitamins, carbohydrates, fats, and proteins." In this initial activity there were already several students who were active in expressing their opinions.</p>
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b. Pre-core activity

	<p>Before the main activity, the teacher model presents a case study. In the case study, the teacher asked the question "Explain the nutritional intake of food in daily life if there are two boys, one is skinny (the son of a scavenger) and the other is healthy (the son of a successful businessman)?" Ismail expressed his opinion "children who are skinny have poor nutritional, they may eat once a day because their parents cannot afford it, while healthy children have good nutritional, they can eat three times a day". Then the teacher model also gave a little explanation about the nutritional food needed by living things as a source of energy, maintaining health and for growth. The food we eat every day contains nutrients, namely carbohydrate,</p> <p>fat, protein, mineral and vitamin. However, in this lesson, the teacher model only discuss carbohydrates and fat. The purpose of this pre-activity is for students to think critically, and to formulate problems. At this stage, children who think critically have begun to appear.</p>
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c. Core activities or practicum.

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This practical activity is a test of foods containing carbohydrate and fat. Before the practicum begins, the teacher model prepares and distributes LKPD. The teacher model also prepared some materials and tools for practicum, such as betadine for carbohydrate testing and paper for fat testing. After the model teacher prepares everything, the teacher distributes LKPD to students. In this practicum stage, the activities of students can be seen from their active attitude, curiosity, cooperation with their respective groups.

However, in this lesson, the teacher model only discuss carbohydrate and fat. The purpose of this pre-activity is students able to think critically, and formulate problems. At this stage, children who think critically have begun to appear.

d. Presentation activities



In this presentation activity, each group presented the results of the practicum that had been carried out. There were four groups that made presentations, namely the blue, green, yellow and pink groups. From the results of the presentation of the food test, 3 groups answered correctly. The results of the presentation include:

- 1) Test carbohydrate/starch foods after the food is given 2 to 3 drops of betadine, if the food contains carbohydrates, the food will change color to dark blue-black. These foods include cassava, potatoes, bread and corn.
- 2) Test the fat food by applying the food to the opaque paper, if the food contains fat it means the opaque paper will look greasy. Foods that contain fat include: coconut milk, butter, cheese, and candlenut.

e. Reinforcement from the teacher

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In this presentation activity, it is intended that students are able to explore students. At the end of the teacher's presentation, the model provides reinforcement that the food we eat every day must contain carbohydrates and fats. In learning about food this is closely related to the letter Al Baqarah verse 168:

اَيُّهَا النَّاسُ كُلُوا مِمَّا فِي الْاَرْضِ حَلٰلًا طَيِّبًا وَلَا تَتَّبِعُوا خُطُوٰتِ الشَّيْطٰنِ اِنَّهٗ لَكُمْ عَدُوٌّ مُّبِيْنٌ

Meaning: "O people! Eat of (food) that is lawful and good that is found on earth, and do not follow the steps of the devil. Indeed, Satan is a real enemy to you." (Q.S. Al-Baqarah: 168)

From the activities of the learning process above, it was found that various forms of activity and student behavior can be used as learning reflections. The findings are as follows:



The emergence of a critical nature in students when expressing opinions



Visible active behavior in students and observations of color changes in food



Students work together in discussions
Students already appear confident in presenting the results of the practicum



Students already appear confident in presenting the results of the practicum

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REFLECTION

Reflection activity is feedback activity. All lesson study teams gather and discuss together about events that occur in the classroom during the learning process. In this observation, data is taken by documenting and recording things that happen.

Reflection activities are carried out after the learning process is complete. Suggestions and inputs are more emphasized on changes in student behavior. The discussion discussed suggestions regarding planning and implementing the next lesson. Although what is observed is the behavior of students, but here it has a good impact on teachers to improve learning strategies, so that in the future the learning process is even better. With this lesson study, the teacher also evaluates the methods used and the learning media used and the tasks assigned to the students.



The teacher observer conveys the findings of the behavior of students during the learning process. Here the model teacher also gets suggestions / input so that learning at the next meeting is better

Recommendation

Recommendations that can be conveyed from this lesson study activity are:

- 1) It was found that students were critical in responding to a question.
- 2) Students are active in practical activities.
- 3) Some students began to feel confident in presenting the results of the practicum.

CONCLUSION

The conclusion of this article is that the foods that are usually eaten by full day school students contain carbohydrates, including rice, potatoes, corn and cassava. Foods containing these carbohydrates when dropped with betadine will experience a blue-black color change, while for foods containing fat that are usually consumed by students when treated with opaque paper will indicate the oil marks on the paper. These foods include butter, cheese, coconut milk and candle nut.

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