

Learning About the Excretion Process Using Simple Media

LEARNING science will be more easily understood by students if the teacher uses visual aids to help with the lesson. Toni Joko Firmanto, a science teacher at SMPNI Trucuk Bojonegoro realizes this. In a lesson on the excretion system in humans, Toni used teaching aids made together with the students. The aids were made from easily available and low-cost materials.

These media were very useful to help students describe the shape of the kidney as one of the organs of excretion, as well as understanding the processes that occur in the formation of urine. The learning media also helped students to develop their ideas in predicting disorders of the kidneys through the activities carried out by using a model of the kidney.

Materials used to make these aids were: an old saw, wood glue, waste paper and wood paint. The material was made into a model of the human kidney, so that the process of excretion could be explained to the students. After the students had performed a series of experiments and observations, they wrote up their observations and displayed their work on

the classroom wall. According to the students, with the help of visual aids, learning science has become more understandable and exciting.



The process of excretion can be easily understood by students with visual teaching aids made from simple materials.

SMPN 3 Krian, Sidoarjo

A Non Partner School that has Changed

EVEN though SMPN 3 Krian, Sidoarjo is not a DBE3 partner school, the enthusiasm to change by using student-centered and meaningful learning is clear. There is a high level of commitment from the school principal and all the

teachers to make changes. Changes in classroom environment can be observed in the management of students' work.

Now in each class there is a display board. The aim is for students to display the fruits of their thinking after attending the lesson and to encourage students to be more active. Some students stated that these changes create a more lively and fun learning atmosphere in class compared to how things used to be, when the students just sat still listening to the teacher.

Not only that, now with a model of cooperative learning, student activity has increased. Whereas previously they seemed scared and timid in expressing their opinions, students now no longer hesitate to give their opinions.

According Rodhi Asa'd, Principal SMPN 3 Krian, DBE3 increased the enthusiasm of teachers. In addition to increasing the teachers' enthusiasm, student activity has also increased and, as a result, lessons are now more enjoyable.



Students working in groups learning Mathematics

Using Contextual Learning to Help Students Learn

South Sulawesi

“**FOR US**, the national exam result is important. But KKM (*Kriteria Ketuntasan Minimum* – the minimum completion criteria) for each subject are just as important,” said Drs. Muslimin, M.Pd, principal of SMPN 1 Tellulimpoe, Sidrap.

According to Pak Muslimin, KKM should be the standard of students’ achievement. The improvement on KKM should be the reference for teachers to consider students’ progress.

As principal, he always supports his teachers and encourages them to improve the KKM each semester. “If the graph of KKM moves in a positive direction, that means students make progress in learning and understand the material better. The mastering of learning material can help them in answering problems at the national exam,” said the principal.

The target of KKM is determined by the teachers. However, they must be careful not to burden students with the standard. Hence, they need to make an analysis of students’ competencies from their examination scores in the primary school. They

also should consider the complexity of the material before determining the standard.

The increase of KKM is in line with the improvement of the quality of learning. When the target is not met, teachers should evaluate their teaching and everything related to it: learning resources, media and class supervision.

The supervision is intended to see whether teacher has mastered the

innovations in learning. “I give advice to teachers to make innovations in contextual learning methods. The development of teaching methods is focused on the school MGMP,” said Pak Muslimin.

It is an advantage that teachers at SMPN 1 Tellulimpoe, Sidrap, have participated in BTL2 and BTL3. “We concentrate on activities to improve teachers’ professionalism and quality of education. We also provide what is



Students of SMP 1 Tellulimpoe, Sidrap measuring force using a spring balance. The teachers developed these activities in the school MGMP.

teaching material and is able to teach it to students. The principal plays an important role in motivating, facilitating and supporting teachers to make

needed for contextual learning, supervise our teachers, and support the development of our students through extra curricular activities,” he added.

Understanding How a Periscope Works

NUR HISHAM, S. Pd a science teacher at SMP YP PGRI Makassar teaches science in a way that makes students active and learning meaningful.

The basic competency to be achieved was to describe optical instruments and their application in everyday life. One of the indicators was that students could explain how optical equipment such as microscopes, binoculars and periscopes work. Students were also expected to be able to create and make a simple periscope.

In this lesson, teachers asked the students to design and make a simple periscope. The main steps in this lesson were an introduction, group work, display and presentation, feedback and finally the students reflected on what they had learned during the lesson.

During the lesson, the teacher monitored the students making their periscopes. After finishing the periscopes, the

students practiced using them. Each group reported on their periscope. They explained how they made it, the materials used, how a periscope works and what it is used for.

“I asked my students to design and make simple periscopes. After they finished working on them, I asked them to try out the periscopes, so that they understand the principle of how they work. My students were enthusiastic in doing this task,” said Ibu Nur.



Each group of students made a simple periscope.

Watching a Silent Movie to Write a Drama Script

DRS. NASIR, M.Pd, a Bahasa Indonesia teacher at SMPN 20 Makassar, South Sulawesi, collected some still pictures and transformed them into a motion picture, using the program *MovieMaker*. "I call it a silent movie, because there is no sound track to explain the sequence of events. I used Kenny G's music to accompany the movie, so that it could help my students to imagine things," explained Pak Nasir.

The seven-minute silent movie was used as a learning resource to encourage his students make up a story, create the characters, and write a script for one-act drama.

During the 80-minute lesson, Pak Nasir encouraged his students to undertake high level thinking, solve problems and use teamwork in order to develop their work. "I gave my students a worksheet which encouraged them to think critically. The worksheet also helped my students to work systematically in developing the ideas and plot, create characters and write a single-act drama script," said Pak Nasir.

In this activity, the students were divided in eight groups. Each group was equipped with a computer. They typed the drama scripts into the com-

puter and the members of the group made corrections as they went along .

To ensure his students' understanding of the ideas, plot and characters, Pak Nasir asked one group to criticize the script of another group.

After they had finished writing the scripts, they acted them out in front of the classroom. While each group performed, the other watched.

With a silent movie a source of learning, Pak Nasir succeeded in enabling his students to produce drama scripts.

The scripts created had some very good ideas, which could be developed even further, for example, the work of one group was called '*The Beauty of Friendship in School*'

There were some positive points from this lesson. First, students reached agreement on the ideas, plot, background of their stories and the characters. Second, the students were able to criticize and make corrections to other groups' work. Third, the students were able to act out their scripts.

In appreciation of his students' work, Pak Nasir made some comments and gave feedback to each group at the end of the lesson. The 80 minutes time for this lesson was used effectively: 10



Students having a discussion in their groups: creating characters for the scripts and preparing to perform in the classroom.

minutes for the introduction, 60 minutes for the main activity and 10 minutes for reflection. The details are as follows:

1. Students worked in eight groups
2. Each group was provided with a computer
3. Students watched the silent movie
4. Each group decided the ideas for the script
5. In group, students discussed the ideas they chose
6. The groups wrote the script on the computer
7. Each group visited another group and edited their script
8. The teacher monitored the students and reminded them to make the script interesting
9. Each group reported on their work and the other students gave feedback.



Students used computers in this Bahasa Indonesia lesson and some of them worked in a corner outside the classroom.



Speaking Through The Vocamino Game

STUDENTS' lacks of confidence, fear of making mistakes, and disinterest in English are the challenges Drs. Herdiyanto, an English teacher, has to face. He invented a game called *vocamino* to address the problem. *Vocamino* is a combination of the words 'vocabulary' and 'domino'.

This *Vocamino* game is intended to help students to practice speaking English by using new vocabulary Pak Herdiyanto uses dominoes, which have words or phrases on the back of them.

The game is intended to help students to learn English in a fun way and it helps students enrich their vocabularies.

The game was created so that the students could learn to express their thoughts, communicate in English, and interact with each other in English. More specifically, the game was used in a lesson on instructions and shopping lists.

Here are the steps to play game: (1) students are divided in groups of six; (2) each group receives 24 *vocamino* cards (12 in English, 12 in Bahasa Indonesia). Each group receives different cards, with different words/phrases; (3) Six students from each group each hold four cards, two in English and two in



English vocabulary dominoes made by Pak Herdiyanto.

Bahasa Indonesia; (4) Students play the game according the following rules: (a) All students must communicate in English. (b) One student lays down a card with the word in English, and another student must respond by laying down a card with the Indonesian equivalent of the English word. Before laying down a card, a student must pronounce the word correctly. (c) When a student mispronounces a word, the others correct him or her.

At the end of the game, each group constructs sentences from the words they have. They write down the sentences in a table prepared by the teacher on a large piece of paper displayed on the white board.

The *vocamino* game lasts for 10 minutes for each group. The game helps students to enrich their vocabularies, improve their pronunciation and enhance their ability in constructing sentences. The student also learn news phrases from this game, such as: *now it's my or your turn; I'm looking for the meaning of this word; here is the meaning; O.K; sorry, pronounce it correctly; you're right*. The game can boost students' confidence in communicating in English.

Learning Biotechnology Through Tape

AMRAN MUHYIDDIN, S.Pd assigned his students to make *tape ketan* (fermented sticky rice). The assignment was a project for 9th grade students of SMPN 4 Pinrang on the topic of biotechnology. The purpose of the project was to help the students to understand the role of micro organisms in biotechnology.

To make sure that the students understood the types of micro organism involved in the process of making fermented food, Pak Amran chose *tape ketan*. *Tape ketan* is a traditional food made of fermented sticky rice. The food is well known to the students and the ingredients to produce it are easy to obtain.

To make this kind of food, students needed one liter of sticky rice (black or white rice) and 10 grams of yeast. First, the rice was soaked in the water

for four hours. Second, the rice was rinsed and steamed. When it's done we call it *sokko* (steamed sticky rice). Third, the *sokko* was cooled down for two hours and then the yeast was spread on it. Fourth, the students put the *sokko* with the yeast on it in a container to ferment.

The *sokko* was left in the containers for three days. The teacher instructed students to store *sokko* in three different containers: (1) *sokko* with yeast in a closed container, (2) *sokko* with yeast in an open container, (3) *sokko* without yeast in an open container. The students observed and analyzed the

sokko.

The 2 x 45 minute periods were used for students to explain the project to the class. They did the process at home and explained the findings in the classrooms. During the presentation and discussion, students were able to explain about the types of micro organisms which made the *sokko* sweet or spoiled it. They also explained about a kind of bacteria which boosts the fermentation process in *tape ketan*.



The *tape* making project by grade 9 students of SMPN 4 Pinrang.

Disseminating Good Practices

One of the purposes of this newsletter is to document the good practices happening at the school level, be it in management or learning activities. In this way, we hope that readers will be inspired to adopt those good practices at their schools. On this page, we present two examples of good practices in Subang, West Java, and Pinrang, South Sulawesi.



Students work written in their own words in English after responding to the meaning of a monologue.

Independent Learners in an English Class

FOR the 8th grade students, *Ibu Dian Purnamasari*, an English teacher at SMPN 2 Jalancagak Subang, West Java, had her own way to conduct the lesson. The lesson aimed to teach the basic competency of responding accurately and appropriately to the meaning of simple monologue and interacting with the immediate environment in the form of a descriptive text and procedure. The teacher spoke only briefly at the start of the lesson to explain the activities.

During the lesson, *Ibu Dian* observed the students' activities and made sure that everything went as planned. The students did as instructed and they took the initiative. They barely needed a teacher.

The activities students did were: (1) The students worked in groups to discuss the vocabulary in the text. (2) The students listened to the monologue. (3) The students brainstormed the content of monologue. (4) The students discussed the characteristics of descriptive texts. (5) The students discussed the function of descriptive texts.

The students enjoyed this activity and, after this, they could identify the information in the text, the kind of language used and the function of a descriptive text. At the end of the lesson, the students' work was displayed in the classroom.

Understanding the Market Price by Buying and Selling

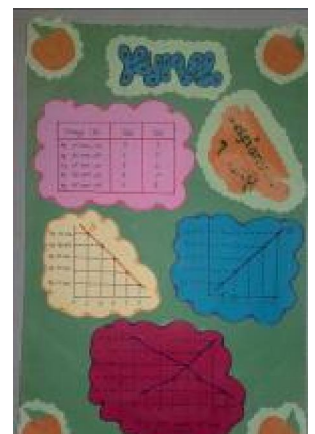
HELPING students understand about the establishment of market prices needs some creativity. *Indrayana, S.Pd*, a social studies teacher at SMPN 1 Suppa, Pinrang, South Sulawesi, conducted an activity involving selling and buying for 8th grade students. The activity was designed to teach the basic competency of 'describing supply, demand and the market price'. "I conducted this activity so that my students don't just have a theoretical understanding of supply and demand," said *Ibu Indra*.

She spent two sessions (4 x 40 minutes) conducting the activity. In the first session, she divided the students in groups. There were groups of sellers and buyers. From this activity *Ibu Indra* wanted her students to gain an understanding of supply and demand. The sellers and buyers interacted in a buying and selling process. The group of buyers asked to buy certain items at various prices. A list of demand prices was made in the table and then was made into a demand curve. Likewise, the group of buyers did the same thing for the supply curve.

The sellers made the demand curve from the lowest price demanded by the buyers, and the buyers made the supply curve from the highest price offered by the sellers.

In the second session, the supply and demand curves made by the students were used as a learning resource. With these curves, *Ibu Indra* gave her students an understanding of supply and demand. In the second session, her students still did the activity of selling and buying. The sellers gave the highest price, while the buyers tried to bargain with the lowest price. *Ibu Indra* observed the bargaining processes by her students. And she reminded her students that when the sellers and buyers agreed on a certain price, then the market price has been reached.

Through the presentation and the work of her students, *Ibu Indra* concluded that her students were able to understand the process of establishing market prices.



Students' work on supply and demand curves

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