Islamic Journal of Integrated Science Education (IJISE), Vol. 3 No. 3, November 2024, pp. 177-185
DOI: https://doi.org/10.30762/ijise.v3i3.3871

Islamic Journal of Integrated Science Education (IJISE)

Program Studi Tadris IPA
Institut Agama Islam Negeri Kediri
e-ISSN : 2986-0865
https://jurnalfaktarbiyah.iainkediri.ac.id/index.php/ijise

HUMAN BEST PRACTICE SCIENCE LEARNING MODEL ON HUMAN RESPIRATORY SYSTEM MATERIAL

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Abstract: School is one of the centers of education where the results of the learning process in it are expected to be able to educate the lives of the nation's children and develop their potential. The success of the learning process really depends on the teacher's teaching. The aim is to find out what learning models are usually used by a teacher and how to apply these models to the learning process. This research uses a qualitative interview and observation approach. The subjects in this study were grade V students of SDIT Hikmatus Sholawat on the material Human respiratory system. The results of this research, the model that is often used is the project-based learning model and interestingly the learning is carried out by making human respiratory system teaching aids which are affordable and interesting. In conclusion, teachers choose methods based on the complexity of the material and learning objectives, where theory is conveyed through discussions or lectures, while concrete concepts are understood through experiments.

Keywords: Practice, Model, Science, Human Respiratory System

Article History:
Received: 29 September 2024; Revised: 07 Desember 2024; Accepted: 08 Desember 2024; Published: 08 Desember 2024

Citation (APA Style):
Hayu, W. R. R., Sondakh, D. C., & Febriani , R. (2024). Human Best Practice Science Learning Model on Human Respiratory System Material. *Islamic Journal of Integrated Science Education (IJISE), 3*(3), 177–185. https://doi.org/10.30762/ijise.v3i3.3871

INTRODUCTION

According to (Syaadah, 2023) School is one of the centers of education where the results of the learning process in it are expected to be able to educate the lives of the nation's children and develop their potential. This is in line with the concept of PJBL or project based learning carried out by the 5th grade homeroom teacher who said that "the learning model that I use most often is the project based learning or PJBL learning model (Dianawati, 2022). Because with projects, children's interest and learning potential usually increase and children usually become more enthusiastic during learning".

The Project Based Learning model is a learning model that focuses on projects as a learning tool to achieve attitude, knowledge, and skill competencies (Ayuninrum, 2024). According to (Faliqulhusna, 2024) one solution to improving student skills is to apply the right learning model, one of which is Project Based Learning or PJBL.

Project Based Learning (PJBL) is a learning model that is usually applied by the homeroom teacher of class V SDIT Hikmatus Sholawat. Based on the results of the interview, the homeroom teacher of class V said "the PJBL learning model that the children have recently practiced is on the learning material of the Human Respiratory System. So, the children will later produce human respiratory system demonstration products".

Based on the results of the interview with the homeroom teacher of class V SDIT Hikmatus Sholawat. It was found that the teacher who taught in class V already had a bachelor's degree in education and had quite a long teaching experience, which was around 10 years. According to (Chandra, 2021) The success of the learning process is very dependent on the teacher in teaching, teaching activities can be carried out properly and correctly if someone has gone through certain education that is indeed designed to prepare themselves as professional teachers.

This study was conducted with the aim of finding out what learning models are usually used by a teacher and how to apply these models to the learning process (Nyihana, 2021). Data was obtained through observation, documentation data, and interviews. The study was conducted by conducting interviews with the homeroom teacher of class V SDIT Hikmatus Sholawat after the teaching and learning activities were completed.

METHOD

The method used in this study is a qualitative research method. This study uses a qualitative approach of interviews and observations with a descriptive approach to gain a better understanding of the context, perceptions, and meanings of the phenomena studied.

Qualitative research is conducted with the aim of studying people's perspectives and ideas to gain a better understanding of the research questions and research problems (Kothari, C.R., 2004). The subjects in this study were grade V students of SDIT Hikmatus Sholawat on the material Human respiratory system.

FINDING AND DISCUSSION

In the observation of the science learning methods of grade 4 elementary school, it was found that in teaching science, teachers apply various methods to create interactive and interesting learning (Yuliati & Sutarto, 2024). Some of the methods used by teachers are project-based learning, group discussions, practical experiments, and lectures (Giswandhani et al., 2024). This approach helps to adjust the learning method to the needs of the material, so that more theoretical concepts can be delivered through lectures and discussions, while concepts that require concrete understanding are explained through experiments (Jamaludin, 2024). To determine the right method, teachers always consider the complexity of the material, student characteristics, and learning objectives. For example, if the material is quite simple and theoretical, the teacher chooses the discussion and lecture method. However, if the material requires a more concrete understanding, the teacher prefers the experimental method.

To ensure student understanding, teachers use question and answer methods, give short quizzes, and conduct review sessions on the material taught. Review sessions are carried out both individually and in the form of student presentations in front of the class. In this way, students can reflect on the material they have understood and help their friends who may still have difficulty. Teachers also use various learning media such as videos and simple experiments to help students understand scientific concepts visually and tangibly. For example, in an experiment on the function of stems in plants, students are invited to use food coloring and celery stalks to see how stems absorb and channel substances.

Learning evaluations are carried out in various ways, ranging from written tests, projects, daily reflections, to tests at the end of a chapter or a certain period. These various forms of evaluation help teachers monitor student understanding and provide opportunities for reflection. In facing the challenges of differences in student abilities, teachers realize that children's abilities in understanding the material vary greatly. There are students who understand quickly, while there are also those who need more time and gradual explanations. For this reason, teachers provide additional time for students who are behind, both inside and outside of class hours. Students who have understood the material are usually given additional

assignments by teachers, while teachers focus on helping students who need more time to understand the lesson.

This approach allows teachers to maintain the quality of learning by paying attention to the needs and characteristics of each student and ensuring that each student gets optimal understanding. Interesting and interactive learning is the key to increasing student engagement in the learning process (Yuniati et al., 2011). Observation results show that In this case, the use of various teaching methods such as project-based learning, group discussions, and practical experiments allows students to be more actively involved. Especially in science subjects, teachers do not only rely on lectures but also involve students in projects and experiments that are tailored to the subject matter, so that students can understand the concepts more deeply. Learning outcomes can also reflect the results of the learning process that has been carried out which makes it possible to evaluate whether students' learning objectives have been achieved or not (Afifah et al., 2023). Science learning in Elementary Schools has an important role in forming the basis of students' knowledge and interest in Science (Handono et al., 2023). The selection of teaching methods is not done carelessly, but is adjusted to the complexity of the material, student characteristics, and learning objectives. When the material is only a simple theory, discussion and lecture methods are considered quite effective. However, if the concept being taught requires concrete understanding, such as scientific phenomena in science, then experiments are preferred so that students can see and feel the process directly. Students' successful experiences in science practice can foster better achievement motivation and a strong will to learn further (Rutonga, 2022).

In ensuring students' understanding of the material, teachers apply question and answer methods, short quizzes, and material reviews. This technique not only helps students reflect on what they have learned but also provides an opportunity for students to re-explain the material in front of their classmates. This helps strengthen their understanding and develop students' confidence in public speaking (Setiawan et al., 2022). Learning media, such as videos, are also used to support more abstract or difficult-to-understand material. In addition, concrete experiments, such as observing the function of plant stems using celery sticks and food coloring, are very useful in providing students with a real picture.

Discussions and experiments are the dominant teaching methods because both provide direct and interactive learning experiences (Sukmanawati, 2018). Discussions allow students to understand the material through two-way dialogue that digs deeper into their understanding, while experiments reinforce concepts through concrete evidence (Tanggu

Daga et al., 2024). Students can see firsthand the results of the scientific process that occurs, so they understand that the concept is not just theory. Through discussions and experiments, students are involved both individually and in groups. In discussions, students participate individually through questions and answers, while in experiments, they work in groups so they can support each other and learn from each other.

Teachers who play a very important role in guiding and educating their students, in this case the teacher must act as a facilitator (Sulistriani et al., 2021). As a form of additional support, teachers provide special treatment for students who are lagging behind. In this case, students who already understand the material will be given additional assignments so that the teacher can focus on providing more explanations to students who need it. That way, all students can develop according to their abilities.

In the science learning process of grade V students of SDIT Hikmatus Sholawat on the material "Human respiratory system". In the early stages, the things that need to be prepared by the homeroom teacher are compiling teaching modules, preparing teaching materials, preparing materials for making human respiratory organs in the form of: used cardboard, straws, sticky tape, balloons, scissors, rubber bands, pictures of the respiratory system and preparing LKPD.

The steps of the Project Based Learning learning model as one of the best practices for implementing the science learning model are as follows:

1. The opening activity begins by greeting students, then praying led by a student, then taking attendance
2. Core activities with the teacher preparing the necessary materials, in carrying out the project activity of making the human respiratory system by preparing more detailed tools including: cardboard, pictures of the lungs, balloons, straws, scissors, glue or sticky tape, rubber
3. The teacher explains how to make a project, in the form of a human respiratory system. The method of making it is as follows: Make a basic frame by cutting a rectangular cardboard then stick the picture of the respiratory organs on the cardboard that has been cut. Next, attach the balloon by inserting the cut end of the straw into the hole in the balloon and attaching the bottom of the balloon to the hole that has been made using glue or tape. Join the ends of the straw that are connected to the balloon using tape or glue. This will represent the trachea that branches into two bronchi.

1 (a) 1 (b) 1(c)

Figure 1. (a)(b)(c). Process of Making Respiratory System Teaching Aids

4. How the props work is to blow through a straw so that when you blow, the balloon (lungs), you will see the balloon expand and deflate. This simulates how air enters the lungs when we inhale and exhale.

2(a) 2(b)

Figure. 2(a) and (b) Process of Implementing the Respiratory System Using the Teaching Aids Made

5. After the product is finished, the teacher gives students the opportunity to present the report (product) that has been made. In addition, the teacher gives students the

opportunity to ask questions based on the results of observations of the presenter's presentation results. The teacher provides reinforcement for the presentation results of each group and makes conclusions about the students' questions.

6. Closing activities by distributing LKPD for students to work on, then checking the LKPD and closing the lesson with a prayer.
7. Based on the results of the interview with the homeroom teacher for class 5, it was said that "the assessment that I will take later is from the results of the project & presenting it in class, because it is to train children to appear in class too". Project-based learning prioritizes students as active learning subjects, provides opportunities to apply what is learned, and opportunities to present or communicate and evaluate their performance. (Werdaningsih, 2021). With the evaluation, teachers can find out the level of success of a learning process (Pratiwi et al., 2024). Learning evaluation is carried out in a variety of ways, including written tests, projects, and reflections. Every day, teachers conduct small evaluations such as short quizzes or reflections to determine the extent of students' understanding. At the end of a chapter or at the end of a certain period, a comprehensive test is conducted to ensure that students have mastered all the material taught. The challenge in implementing this method is the variation in student abilities. Each student has a different learning speed, some understand quickly, but some need gradual explanations. Teachers are aware of this and try to address it with an appropriate approach.

CONCLUSION

From the interview results, it can be concluded that the selection of diverse learning methods is very important to adjust the material to the needs and characteristics of students. The use of methods such as project-based learning, discussions, experiments, and lectures helps create a more interesting, interactive, and relevant learning atmosphere to the science material being taught. Teachers choose methods based on the complexity of the material and learning objectives, where theory is delivered through discussions or lectures, while concrete concepts are understood through experiments. Teachers also use various forms of evaluation to monitor student understanding, such as questions and answers, short quizzes, projects, and periodic tests. This helps teachers know the level of student understanding and provide additional time for those who are lagging behind, so that all students have an equal opportunity to understand the lesson. Challenges in the form of variations in student abilities

can be overcome by providing special attention, either through additional assignments for students who understand quickly or more intensive guidance for those who need it.

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