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The Effect of the Discovery Learning Model Supported by Anatomical Poster Media on Improving Conceptual Understanding of the Digestive System in Year 5 at SDN 1 Jatimerta

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ABSTRACT

This study aims to determine the effect of the Discovery Learning model assisted by anatomical poster media on the conceptual understanding of fifth grade students regarding the human digestive system at SDN 1 Jatimerta. The study was motivated by students' low understanding of science concepts due to teacher centered learning and the limited use of visual learning media. This research employed a quantitative approach using a pre experimental method with a one group pretest posttest design. The sample consisted of 30 fifth grade students. Data were collected through pretest and posttest instruments, classroom observations, and student response questionnaires. Data analysis was conducted using descriptive statistics, the Wilcoxon Signed-Rank Test, and N-Gain analysis. The results showed that students' conceptual understanding improved significantly after the implementation of the learning model. The average score increased from 43.23 on the pretest to 86.33 on the posttest. The Wilcoxon Signed-Rank Test indicated a significant difference between pretest and posttest scores. In addition, the N-Gain score of 0.7578 was categorized as high. The study concludes that the Discovery Learning model assisted by anatomical poster media has a positive effect on improving students' conceptual understanding of the human digestive system.

1. Introduction

Education is a planned, structured process aimed at developing individuals' potential comprehensively. According to Habsy et al. (2024), it utilizes various learning strategies to enhance cognitive skills and knowledge, shape attitudes and values affectively, and develop psychomotor skills. Beyond transferring knowledge, education seeks to build character, deepen understanding, and

encourage practical application of values and skills in daily life. In the global era of the 21st century, it is not enough for students to merely master factual material; they are also required to understand natural phenomena conceptually, think critically, and solve problems based on scientific evidence. These competencies are essential for developing human resources who are flexible, reflective, and capable of competing amid the rapid advancement of science and technology. A number of international and national studies reveal that elementary school students' mastery of scientific concepts has not yet developed optimally; therefore, an innovative and context relevant approach to learning is needed to continuously improve the quality of science education (Fatmawati & Isnaeni, 2024).

The implementation of the Merdeka Curriculum brings about a shift in the orientation of the learning process by placing students at the center of learning activities. Learning is designed so that students are actively engaged, explore knowledge, and gain meaningful learning experiences (Dyah et al., 2024). In elementary school science classes, this curriculum emphasizes a learning process that encourages students to observe phenomena, formulate questions, gather various pieces of information, and then draw conclusions based on their learning experiences. The science learning process emphasizes providing students with hands on experiences to develop various competencies so they can explore and understand the natural world around them scientifically (Susilawati et al., 2018). Through this approach, students are not only guided to memorize scientific facts but are also expected to understand scientific concepts more deeply and relate them to events in their daily lives. Students' understanding of a particular concept will influence the quality of their solutions when solving problems (Yulianawati et al., 2019). This finding is consistent with previous studies indicating that students' conceptual understanding in science remains relatively low and requires constructivist learning approaches such as Discovery Learning to promote active concept construction (Fathiyah et al., 2023).

Evidence from the field shows that the implementation of science education in elementary schools still faces various obstacles. Several research findings indicate that classroom learning activities are still largely dominated by a lecture based approach, so students more often act as recipients of information rather than being actively involved in the learning process (Abdelsattar & Labib, 2019). If instruction is not supported by appropriate strategies and adequate visual aids, students often struggle to visualize the biological processes occurring within the human body (Susbandya et al., 2018). This issue is particularly evident when teaching the human digestive system in fifth grade elementary school. Visual aids such as posters or scientific illustrations in science education are still not being utilized optimally, resulting in the material being conveyed primarily through verbal instruction (N. P. Lestari & Suriani, 2025). Teaching aids are a valuable component of instructional media that help clarify the concepts being studied (Susilawati & Jannah, 2019). Learning media are important because they help visualize abstract concepts, increase motivation, and encourage active student participation, especially in learning digestive system concepts (Fatimah et al., 2026). The involvement of metacognition in problem solving enables the development of a strong and

comprehensive understanding of the problem, accompanied by logical reasoning (Yulianawati et al., 2016).

Preliminary observations at SDN 1 Jatimerta indicate that science instruction in fifth grade is still dominated by a one-way teaching method, with the teacher as the center of knowledge. Limited opportunities for independent observation and exploration, as well as suboptimal use of visual aids, lead students to rely on rote memorization without gaining a deep understanding of the concepts. Consequently, learning outcomes are low, and students' understanding of the human digestive system is weak; they struggle to explain the functions of digestive organs, sequence the digestive process, and comprehensively understand the interrelationships among the organs. Similar findings have been reported in previous studies, which revealed that many students still experience difficulties in understanding digestive system concepts and therefore require innovative learning media to facilitate meaningful learning (S. Lestari et al., 2025).

The findings of Fazriyah & Nursyfa (2022) demonstrate that the use of the Discovery Learning model is effective in developing higher order thinking skills when teaching material on the human digestive system. Other studies also confirm that Discovery Learning contributes significantly to improving conceptual understanding and scientific process skills because students are trained to observe, process data, and draw conclusions independently (Mawaddah & Martini, 2022). This is supported by Mutmainnah et al. (2025), who reported that combining Discovery Learning with visual digital media creates more interactive learning and improves students' engagement and learning outcomes. In terms of instructional media, studies on visualization indicate that the use of anatomy posters greatly helps students understand the structure of the body and the relationships between organs in a more concrete way (Gea et al., 2024).

In general, while numerous studies on the application of Discovery Learning and the use of visual media have been published, studies that specifically combine these two approaches namely, Discovery Learning supported by anatomy posters in lessons on the human digestive system are still relatively rare. Discovery Learning is a learning model that positions students as active participants in discovering concepts, thereby fostering more meaningful cognitive engagement. This learning process enables students to construct their own understanding through exploration and authentic learning experiences rather than memorizing information (Rizky et al., 2026). When applied to the human digestive system, this model effectively enhances conceptual understanding because students are engaged in observing, analyzing, and drawing conclusions about the relationship between the structure and function of organs (Dafira & Widodo, 2021)

Most studies have focused solely on testing the effectiveness of Discovery Learning without integrating it with visual media specifically designed to suit the characteristics of the subject matter (Amelia et al., 2025). Research examining the effect of combining Discovery Learning with anatomical posters on students' conceptual understanding remains limited. Most previous studies have focused on the use of digital media, such as videos and animations. This study offers a simple,

economical, and easy to implement alternative, particularly for schools with limited technological resources. The results of this study are expected to serve as a reference for teachers in selecting effective learning strategies and media to enhance students' conceptual understanding.

This study aims to analyze the effect of implementing the Discovery Learning model supported by anatomical posters on improving the conceptual understanding of fifth-grade students at SDN 1 Jatimerta regarding the digestive system by comparing pretest and posttest results; to describe the implementation of this model during instruction; and to determine students' responses to the use of the Discovery Learning model and anatomical posters in the learning process of the human digestive system. The research results are expected to provide a comprehensive overview of the effectiveness and implementation of the learning model, as well as students' responses to this method, in order to improve the quality of science education.

2. Methodology

This study used an experimental method. It is a research approach that checks how a treatment affects things in a controlled way (Sugiyono, 2022: 72). The study uses a quantitative design. This study examines the effect of the Discovery Learning model assisted by anatomical poster media on students' conceptual understanding of the human digestive system. The Discovery Learning model with posters serves as the independent variable, while students' conceptual understanding functions as the dependent variable. A quantitative experimental approach was employed to obtain objective and measurable data regarding changes in students' understanding by comparing learning outcomes before and after the treatment. This method was chosen because it enables the researcher to evaluate the effectiveness of the learning model systematically and to identify its impact on students' conceptual understanding. Through the analysis of pretest and posttest results, the study aims to determine the extent to which the use of Discovery Learning supported by poster media improves students' understanding of digestive system concepts. Ultimately, the research seeks to provide empirical evidence that the Discovery Learning model assisted by anatomical posters can effectively enhance students' conceptual understanding of the human digestive system.

This approach helps to get data on changes, in students conceptual understanding. The quantitative method in this study was implemented through the use of a concept comprehension test and a questionnaire designed based on cognitive indicators, with responses measured using a Likert scale to describe students' responses and perceptions of the learning process. The collected data were then analyzed using descriptive and inferential statistical techniques to test for significant differences in scores between the pretest and posttest. The research process was systematically organized into three main phases: the preparation phase (research planning), the treatment phase (experiment implementation), and the conclusion phase, which included data processing, interpretation of results, and the preparation of the research report.

The study involved 30 fifth grade students of SDN 1 Jatimerta, consisting of 18 boys and 12 girls. The sample was determined using a nonprobability sampling technique, specifically saturation sampling. Therefore, the entire population was included as the research sample. This sampling technique was selected because the population was relatively small, making it feasible for the researcher to involve all fifth grade students in the study and obtain comprehensive data from the whole population. The instruments used to collect data included observation sheets, multiple choice tests, and student response questionnaires. Research data were collected through participatory observation, pretest and posttest assessments, questionnaire administration, and documentation. The collected data were then analyzed using a normality test to determine data distribution, followed by hypothesis testing through the Wilcoxon Signed-Rank Test to examine the significance of differences between pretest and posttest scores. In addition, the N-Gain test was employed to measure the extent of improvement in students' conceptual understanding after the implementation of the learning intervention.

3. Results and Discussion

Results

The results of this study are based on what we found out from the data we collected when we taught using the Discovery Learning model and also used posters. We looked at the data to see how the students understood things before and after we tried this way of teaching. We wanted to know if the way we taught was effective and if the students liked the Discovery Learning model. We used numbers and statistics to see if this way of teaching really helped the students understand the digestive system better. The Discovery Learning model and the anatomical posters were used to help the students learn about the human digestive system.

The science learning process was conducted using the Discovery Learning model combined with anatomy posters, following a pre-designed learning syntax consisting of the stages of stimulation, problem statement, data collection, data processing, verification, and generalization. First, during the stimulation stage, the teacher began by relating the students' experiences to the topic and using anatomy posters to stimulate their curiosity about the digestive system. Next, during the problem statement stage, students observe the posters and formulate questions and problems related to the material. During the data collection stage, students actively gather information from posters, textbooks, and group discussions under the teacher's guidance. The data processing stage involves analyzing and understanding data regarding the functions and processes of digestion, using the posters as visual references. Next, during the verification stage, students present the results of their discussions with the help of the posters, and the teacher provides corrections and reinforces key concepts. Finally, during the generalization stage, students summarize the material and relate it to the practice of a healthy lifestyle while using the anatomy posters to strengthen their conceptual understanding.



Figure 1. Anatomy of the Digestive System Posters as a Teaching Tool

The image above shows a Digestive System Anatomy Poster, which serves as an educational visual learning tool, specifically designed to help students understand the structure and function of the organs in the human digestive system in a systematic and realistic way. This poster presents detailed and structured illustrations of the digestive organs, making it easier for students to observe and identify parts such as the mouth, esophagus, stomach, small intestine, large intestine, as well as accessory organs like the liver and pancreas that play a role in the digestive process. With this visual aid, students can more easily transform previously abstract conceptual ideas into concrete and easily understandable concepts. In addition to serving as a visual aid, this anatomy poster also functions as an initial stimulus in the Discovery Learning model, where students are encouraged to engage in observation, analysis, and active discussion regarding the digestive system. The poster not only optimizes students' process of discovering concepts but also enhances their engagement and active participation during the learning process. Through this medium, students can connect the visual representation of the digestive organs with their biological functions and the mechanical and chemical processes occurring within the body, thereby deepening and enriching their conceptual understanding of the digestive system.



Figure 2. Student Activity Observing and Discussing Posters on the Anatomy of the Digestive System

The image above shows students observing and discussing a poster on the anatomy of the digestive system as part of a lesson using the Discovery Learning model. At this stage, students are actively engaged in the learning process by carefully observing the illustrations of the digestive organs presented on the anatomical poster. This observation activity serves as an initial stimulus to spark students'

curiosity and attention toward the material to be studied. Next, students are encouraged to discuss in heterogeneous groups, addressing various questions and issues related to the functions and relationships among the digestive organs based on the information they gathered from the poster. This discussion provides students with the opportunity to share ideas, make predictions, and conduct collaborative analysis, enabling them to discover concepts independently and build a deeper understanding. This learning model emphasizes active student participation so that the learning process is not solely teacher-led but instead highlights collaborative exploration of knowledge. Thus, the activities depicted in this image support increased student engagement, motivation, and conceptual understanding of science material.

Table 1. Distribution of Pre-test Results

Score	Category	Frequency	Max	Min	Average
> 73,33	Success	0	66	20	43,23
< 73,33	Unsuccess	30			

Source: Data processed (2026)

Based on the pretest data in Table 1 above, it is evident that of the 30 fifth-grade students at SDN 1 Jatimerta, not a single student met the established Learning Objective Achievement Criteria (KKTP), which requires a minimum score of 73.33. All students 100% scored below the specified proficiency standard, meaning they all fell into the “not proficient” category. The highest score achieved by a student was only 66, while the lowest was 20, with an average score of 43.23. These results confirm that students’ conceptual understanding of the human digestive system remains low and inadequate. This low level of understanding is most likely due to the previously used teaching methods, which tended to be passive and placed greater emphasis on verbal delivery of material, making it difficult for students to construct concepts independently. Because the material on the digestive system is abstract and complex, without learning media that support the visualization of concepts, students experienced difficulty systematically relating the structure and function of digestive organs during the learning process. Therefore, this initial learning situation indicates an urgent need to implement a more interactive and contextual learning approach such as the Discovery Learning model aided by anatomical posters so that the learning process becomes more effective in improving students’ understanding and learning outcomes.

Table 2. Distribution of Post-test Results

Score	Category	Frequency	Max	Min	Average
> 73,33	Success	30	100	73,33	86,33
< 73,33	Unsuccess	0			

Source: Data processed (2026)

Based on the results presented in Table 2, it was found that all 30 fifth-grade students at SDN 1 Jatimerta met the Learning Objective Achievement Criteria (KKTP) at a rate of 73.33. The posttest data show that the highest score achieved by a student was 100, the lowest was 73.33, and the class average was 86.33. These results indicate that after participating in instruction using the Discovery Learning

model supported by anatomical posters, students' conceptual understanding of the human digestive system was in the "very good" category. This overall achievement indicates that the implemented learning model was effective in helping students understand the concepts of the human digestive system, enabling all students to achieve the predetermined learning targets.

Table 3. Results of the Normality Tests for the Pre-test and Post-test

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.117	30	.200*	.967	30	.460
Posttest	.184	30	.011	.924	30	.034

Source: Data processed (2026)

If we look at Table 3 we can see what the Shapiro-Wilk test says about the data and the posttest data. The pretest data got a significance value of 0.460. This value is greater than 0.05. So the pretest data is normally distributed. The posttest data is different. It got a significance value of 0.034. This value is, than 0.05. This means the posttest data is not normally distributed. So what do these results tell us? They tell us that the data does not follow the distribution rules all the time. The pretest data follows the rules. The posttest data does not. The research data is a mix. The pretest data is normally distributed. The posttest data is not. This is what the Shapiro-Wilk test shows us about the research data. The pretest data meets the normality rules. The posttest data does not meet these rules.

Table 4. Hypothesis Test Results of Wilcoxon Signed Rank Test

Test Statistics	
	<i>Posttest - Pretest</i>
Z	-4.843 ^b
Asymp. Sig. (2-tailed)	.000
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks.	

Source: Data processed (2026)

If we look at Table 4 we can see that the Asymp. Sig. Value is 0.000. This value is than 0.05, which is the level we decided would be important. So we have to reject the hypothesis, which is H₀ and accept the alternative hypothesis, which is H_a. What this result tells us is that there is a difference between the scores students got on the pretest and the posttest when it comes to understanding the human digestive system. The difference we saw means that using the Discovery Learning model with posters really helped students understand the concept better as they learned. The digestive system is something that students had a hard time understanding at first but with the Discovery Learning model and anatomical posters they were able to learn it better. The Discovery Learning model and anatomical posters had an impact, on students understanding of the human digestive system.

Table 5. N-Gain Test Result

	N	Descriptive Statistics		Mean	Std. Deviation
		Minimum	Maximum		
Ngain_Score	30	.50	1.00	.7578	.12740
Ngain_Persen	30	50.00	100.00	75.7842	12.74002
Valid N (listwise)	30				

Source: Data processed (2026)

Based on the results presented in Table 5, the mean N-Gain Score obtained was 0.7578. Referring to the established N-Gain interpretation criteria, this value falls within the range of $0.70 \leq g \leq 1.00$, indicating a high level of improvement. These results suggest that the application of the Discovery Learning model supported by anatomical poster media was highly effective in enhancing students' conceptual understanding of the human digestive system.

The results of the study on how something works show that the average N-Gain Percent was 75.7842 percent. This number is good because it is than 75. So the Discovery Learning model with posters is effective in helping students understand things better. The people doing the study also watched what was happening in the classroom. Gave a score of 41 out of 42. This means that 97.62 percent of the learning plan was done. This is a good result because it is between 81 and 100 percent. the study found that almost everything in the learning process using the Discovery Learning model with posters was done as planned. This includes all the steps like getting the students interested stating the problem collecting data looking at the data checking the results and making statements. Using posters and digestive organ magnets was also very helpful. These tools helped students understand where the digestive organs are, what they do and how food is digested in the body. The study also showed that the classroom was run well the language used was good. The students were assessed effectively. The findings indicate that the Discovery Learning model assisted by anatomical posters is effective in improving students' understanding of the human digestive system. The use of posters and digestive organ magnets supports the learning process by providing clear visual representations of the concepts, making them easier to understand. As a result, students are able to develop a better understanding of the human digestive system through active and meaningful learning experiences.

The information we have comes from a questionnaire that we gave to 30 students. We wanted to see what they thought about the learning activities we did using the Discovery Learning model and anatomical posters. After looking at the answers we found out that 76.16% of the students liked the way we used the Discovery Learning model with the posters. This means that most of the students thought the learning process was good. The way we taught the students, in this study worked well. The students were interested. They understood the human digestive system better because of the discovery based activities. The anatomical posters also helped the students understand the material because they were visual and easy to look at.

The Discovery Learning model was good because it let the students take part in the learning activities. They got to talk about things look at pictures and videos collect

information and make their decisions. This made the learning experience more meaningful. Focused on the students. The students liked using the posters to learn about the digestive system. The Discovery Learning model and the anatomical posters helped the students learn in a way.

Discussion

- a. A Study of the Effect of Implementing a Discovery Learning Model Supported by Anatomical Poster Media on Improving Conceptual Understanding among Fifth Grade Students' in SDN 1 Jatimerta.

Phase 1: Stimulation (Initial Stimulation)

The teacher provides an initial stimulus in the form of questions, phenomena, images, or visual media relevant to the lesson material. The goal is to spark students' curiosity and motivation so that they become interested in exploring and investigating the material more deeply. At this stage, the teacher begins the lesson by posing a thought-provoking question and displaying a poster of the digestive system's anatomy. The clear visualization of the digestive organs on the poster sparks students' curiosity and motivates them to investigate further. At this stage, the poster serves as a crucial concrete tool that helps students form a realistic picture of the digestive organs' structure, making abstract concepts easier to understand. Armed with this visualization, students are motivated to actively engage with the learning material, significantly increasing their attention and cognitive involvement. This aligns with Bruner's theory, which emphasizes that learning becomes more meaningful when students discover concepts on their own, with deep understanding formed through active engagement in gradually connecting concepts—from the intuitive to the symbolic thereby strengthening their knowledge structure and reasoning skills to understand concepts in a lasting way (Syarifah et al., 2025).

Phase 2: Problem Statement

Students are guided to identify and formulate problems related to the observed phenomena. This stage aims to develop students' critical and analytical thinking skills in determining the focus of their investigation. Following the initial observations, students are guided to formulate questions or problems based on what they see on the posters. This activity trains students to think critically and analytically in determining the focus of their investigation. With a clearly defined problem, students have a clear objective for seeking further information relevant to the human digestive system. Through the use of posters, students can see the relationships between organs and the functions of the digestive system, thereby encouraging them to ask relevant questions and explore concepts in greater depth. This process reflects a constructivist approach that positions students as active participants in learning, where knowledge is constructed through discovery and reflection on the information presented.

Phase 3: Data Collection

Students gather information from various sources, such as through direct observation, reading learning materials, engaging in discussions, or using other

learning media. This phase aims to enrich data relevant to the problem that has been formulated. Anatomical posters serve as the primary source of information, helping students gather data in a visual and concrete manner. Students conduct detailed observations of the organs depicted on the posters, noting the functions and interrelationships between organs based on the images and labels provided. Additionally, the posters provide visual stimuli that reinforce conceptual understanding through the direct experience of observing anatomical structures that cannot be observed directly in everyday life. This data-collection activity is accompanied by group discussions that foster social engagement and collaboration among students, allowing conceptual understanding to be built through active interaction and the exchange of ideas.

Phase 4: Data Processing

The collected data is then analyzed, categorized, and interpreted by the students themselves. At this stage, students begin to organize information and identify patterns or relationships among existing concepts. Students analyze and organize the information they have gathered from the anatomy posters and previous discussions. With the teacher's guidance, students filter out key information, categorize organ functions, and connect digestive processes in chronological order. This process requires students to use critical and logical thinking to construct knowledge systematically. The visual nature of the posters facilitates the gradual internalization of concepts, as students can refer to a complete illustration of the digestive system, which helps them understand everything from the details to the big picture. Thus, this stage not only reinforces factual knowledge but also fosters conceptual analysis skills.

Phase 5: Verification (Proof of Concept)

Students verify or validate their findings by comparing the data they have obtained with applicable theories or concepts. This stage helps students test the validity of the hypotheses or initial assumptions they have formulated. It engages students in testing the validity of the information and concepts they have developed. By utilizing anatomy posters, the teacher guides students to compare their hypotheses or understanding with the available visual references, correct any misunderstandings, and reinforce scientifically accurate concepts. This activity serves as an important reflective and confirmatory process to ensure that the understanding students have built is accurate and consistent with sound scientific knowledge. Verification supported by concrete media serves as a learning tool that reduces misconceptions and strengthens students' retention of the concepts they have learned.

Phase 6: Generalization (Drawing Conclusions)

Students formulate conclusions or general concepts based on the results of their investigations. This stage marks the culmination of the discovery process, during which students gain a comprehensive and meaningful conceptual understanding. Teachers help students formulate conclusions from the discovery process they have undertaken. Through final discussions and with the aid of anatomy posters, students are able to integrate their understanding of the structure, function, and processes of the digestive system into a comprehensive concept that they can apply in everyday

life contexts, such as the importance of a healthy diet. The posters, which provide systematic visual representations, help students connect smaller parts into a cohesive and meaningful conceptual whole. At this stage, learning not only generates knowledge but also encourages the transfer of concepts to real-world situations, resulting in a deeper and more lasting understanding for students. Overall, each stage of the Discovery Learning syntax, implemented with the support of anatomical posters, has created an active, collaborative, and meaningful learning process.

The results of the study show that the implementation of the Discovery Learning model, supported by anatomical posters, has a positive impact on improving students' conceptual understanding of the human digestive system. This is evidenced by a significant increase in students' pretest and posttest scores. Before the intervention, students' understanding was still low because previous instruction had emphasized the teacher's verbal explanations, making it difficult for students to grasp abstract material. A very clear change was observed after the implementation of the Discovery Learning model, supported by anatomical posters, in the learning process. This model enabled students to understand the concepts of the human digestive system in a more in-depth, structured, and meaningful way. According to Bruner's theory, knowledge acquired through the discovery process is easier for students to understand, remember, and apply over the long term because of their active involvement in constructing knowledge independently. Test results show that students who learned using the Discovery Learning model and anatomical posters experienced a significant increase in understanding compared to before, proving the effectiveness of this learning approach. The success in improving students' conceptual understanding in this study is closely tied to the characteristics of the Discovery Learning model, which encourages students to discover knowledge independently through a series of learning activities. The combination of the discovery process and visual media helped transform the concept of the digestive system which was initially abstract into something more concrete and easier to understand.

These results are consistent with research conducted by (Rizawanti et al., 2024) which found that the Discovery Learning model supplemented with animated media also had a significant effect on improving students' conceptual understanding. The main difference lies in the type of media used; Rahayu's study employed virtual digital animation, which requires adequate technological support. Meanwhile, this study uses anatomical posters, which are concrete, visual, and easy to implement in elementary school settings with limited technology. Thus, the combination of Discovery Learning and anatomical posters offers a practical and effective learning alternative, particularly in the context of science education in elementary school, while also contributing new insights into the development of learning strategies tailored to students' conditions and needs. These results align with the findings of Wardana et al. (2025), who stated that students' success in understanding concepts is influenced by the selection of instructional models and learning media used during the learning process. Similar findings were reported by Mawaddah & Martini (2022), who noted that Discovery Learning can enhance conceptual understanding and scientific process skills because students are actively engaged in

discovering knowledge firsthand. Furthermore, research by Ndruru (2024) demonstrated that the use of Discovery Learning in teaching the digestive system effectively improves students' conceptual mastery through exploration and scientific reasoning activities. Consistent results were also reported by Amelia et al. (2025), who found that integrating visual media into Discovery Learning had a significant positive impact on improving learning outcomes and conceptual understanding among elementary school students.

b. A Discussion on the Implementation of the Discovery Learning Model Using Anatomy Posters at Grade 5 in SDN 1 Jatimerta.

The observational data show that the implementation of the Discovery Learning model using anatomy posters proceeded optimally in accordance with the learning stages, such as stimulation, problem formulation, data collection, data processing, verification, and generalization. Stimulating learning through anatomy posters of the digestive system increased students' attention and curiosity. Clear visualizations of organs help students understand the structure of the digestive system in a tangible way, thereby facilitating observation and conceptual understanding. These results support Bruner's cognitive theory, which states that learning is more effective when students understand concepts through direct experience and self-discovery. Students were also given the opportunity to formulate problems after observing the posters, encouraging them to ask questions, formulate hypotheses, and explore answers based on the information they obtained. These findings align with constructivist theory, which emphasizes the construction of knowledge through students' active engagement with their environment and learning experiences. Student engagement was evident during the data collection and processing phases, where students not only received information but also built their own understanding of the functions of digestive organs and the mechanisms of human digestion. These findings indicate that discovery-based learning can develop students' scientific thinking skills, one of the key characteristics of science education in elementary school. The learning process continued into the verification and generalization stages, when students presented the results of their discussions and formulated conclusions based on the information they had obtained. The application of the Discovery Learning model using anatomical posters aligns with the characteristics of science education, which encourages students to observe, ask questions, gather information, process data, and draw conclusions independently.

The results of this study align with the findings of Fazriyah & Nursyfa (2022), The person who said this was talking about the Discovery Learning model. They think it is a way to get students more interested in learning. This is because students are directly involved in finding out and creating their knowledge Amelia et al. (2025), The results of this study also agree with what Amelia and her team found out in 2025. They discovered that using videos and pictures in Discovery Learning makes the learning experience fun for students. The integration of learning media within the Discovery Learning model improves students' conceptual understanding while fostering greater engagement in the learning process.

c. A Study of Students' Responses to the Implementation of the Discovery Learning Model Assisted by Anatomy Posters at Grade 5 in SDN 1 Jatimerta

Based on the questionnaire results students liked the Discovery Learning model with posters. Most students gave feedback on learning about the human digestive system. The students thought the learning activities were good and helped them understand the material in a way. Students enjoyed the learning experience. Found it helpful. The Discovery Learning model and anatomical posters made learning engaging and meaningful, for students. Student engagement was evident as they observed the anatomical posters, collaborated in group discussions, completed worksheets, and presented their discussion findings in front of the class. This situation demonstrates that the implemented learning process was able to create an interactive learning environment, encourage student participation, and foster an enjoyable learning experience. These findings can be explained based on constructivist theory, which views students as active agents in the process of knowledge construction. The opportunity to explore, observe, and discuss the material directly allows students to engage more deeply in the learning process, thereby increasing their motivation and interest in learning.

Support for these research findings is also found in the study by Saputri et al. (2024), which explains that the use of posters in learning can increase students' motivation to learn, capture their attention, and aid the process of recalling information through engaging visual presentations. In line with these findings, the study by Gea et al. (2024) revealed that visual anatomical media help students understand the relationships between body organs in a more tangible and concrete way. Consistency with these findings is also evident in the study conducted by Rizawanti et al. (2024), which showed that the use of visual media in Discovery Learning received positive feedback from students because it helped them understand concepts that are difficult to explain through verbal explanations alone.

4. Conclusion

Based on the research findings, the implementation of the Discovery Learning model supported by anatomical posters proved effective in enhancing students' conceptual understanding of the human digestive system. This learning model successfully provided an active and meaningful learning experience, enabling students to discover concepts independently with the support of visual aids that clarified abstract material. Furthermore, the implementation of the learning process went very well in accordance with the established plan and stages, demonstrating the readiness of both teachers and students as well as the suitability of the media used. Student responses to the implementation of this model were also positive, indicating that the learning method was able to increase their motivation, activity, and engagement in the learning process. Overall, this study successfully demonstrated that the integration of the Discovery Learning model and anatomical posters is an effective approach suited to the characteristics of elementary school students in understanding the human digestive system. Students are also expected to be more active in observation, discussion, and concept discovery activities to

optimize learning outcomes. For schools, support for the use of innovative learning models and the provision of adequate visual media need to be enhanced to support the quality of science education. Future research is recommended to test the application of this model to other science topics, involve a larger sample size, and examine its impact on other aspects such as critical thinking skills, learning motivation, and scientific process skills.

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