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IDENTIFICATION OF MISCONCEPTIONS OF HUMAN SENSORY MATTER USING THE CERTAINTY OF RESPONSE INDEX (CRI) METHOD

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Abstract
The material of the five senses in humans is one of the materials that often causes errors for students in solving problems. This study aims to a) identify student misconceptions using the Certainty of Response Index (CRI) method of human sensory material in grade IV elementary school students, b) describe the causes of misconceptions. This study used a qualitative descriptive approach. This research was conducted at SD Negeri Srimulyo 2 Sragen, with the subject of the study being grade IV students as many as 15 children. The data collection techniques used are tests, interviews and documentation. The research instrument used is 15 questions accompanied by CRI that has been tested for validity and reliability. The wetness test in this study used a triangulation method, namely by comparing test results with interview results. The data was analyzed by referring to CRI categorization which was used to measure the level of confidence of learners about the answers they gave, so as to distinguish learners who guessed, understood concepts, did not understand concepts, and misconceptions. The results showed that a) as many as 41.93% or there were 6 students experiencing misconceptions. The highest misconception of this study is on the indicators of the function of the five senses of humans, while the lowest misconception is on indicators of understanding and types of five senses., b) there are several factors that cause misconceptions, namely the difficulty of students in memorizing the material, the lack of interest in learning students, and inappropriate teacher teaching methods. Thus, there is a need for innovation and evaluation for and teachers to improve the use of learning methods and media.
Keywords: *Misconceptions; Human Senses; CRI*

Abstrak
Materi panca indra pada manusia menjadi salah satu materi yang sering menimbulkan kesalahan peserta didik dalam menyelesaikan soal. Penelitian ini bertujuan untuk a) mengidentifikasi miskonsepsi siswa menggunakan metode Certainty of Response Index (CRI) materi panca indera manusia pada peserta didik kelas IV SD, b) mendeskripsikan penyebab munculnya miskonsepsi. Penelitian ini menggunakan pendekatan deskriptif kualitatif. Penelitian ini dilakukan di SD Negeri Srimulyo 2 Sragen, dengan subjek penelitian yaitu peserta didik kelas IV sebanyak 15 anak. Teknik pengumpulan data yang digunakan yaitu tes, wawancara dan dokumentasi. Instrumen penelitian yang digunakan adalah 15 soal disertai dengan CRI yang telah diuji validitas dan reliabilitasnya. Uji kebasahan dalam penelitian ini menggunakan triangulasi metode yaitu dengan membandingkan hasil tes dengan hasil wawancara. Data dianalisis dengan mengacu pada pengkategorian CRI yang digunakan untuk mengukur tingkat keyakinan peserta didik tentang jawaban yang mereka berikan, sehingga dapat membedakan peserta didik yang menebak, paham konsep, tidak paham konsep, dan miskonsepsi. Hasil penelitian menunjukkan bahwa a) sebanyak 41,93% atau terdapat 6 peserta didik mengalami miskonsepsi. Miskonsepsi tertinggi penelitian ini yaitu pada indikator fungsi panca indera manusia, sedangkan miskonsepsi terendah yaitu pada indikator pengertian dan macam panca indera., b) terdapat beberapa faktor yang mengakibatkan miskonsepsi yaitu kesulitan peserta didik dalam menghafal materi, minat belajar peserta didik yang kurang, dan metode mengajar guru yang kurang tepat. Dengan demikian perlu adanya inovasi dan evaluasi bagi maupun guru untuk meningkatkan penggunaan metode dan media pembelajaran.
Kata Kunci: CRI; Miskonsepsi; Panca Indera

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Introduction

Education is a conscious and planned effort in creating a good learning atmosphere for students. The potential of students must be developed, so as to create spiritual strength, personality, intelligence and skills in society, nation and state (Santika, 2020). Effective teaching is essential in providing a correct understanding of various subject matter, including science. According to Mariyadi &; Ragil (2023) Education today directs students to use a constructivist approach in acquiring knowledge. Education in Indonesia at this time requires a discussion in the field of learning to improve the quality of education and anticipate the weaknesses of conventional learning, it is necessary to strive for better learning methods, learning resources, and learning media (Puspitarini &; Hanif, 2019).

One of the subjects taught at the elementary school level is Natural Sciences (Science). Science learning is an effort to understand the universe through targeted observations using procedures, and explained by reasoning so as to obtain conclusions (Effendi-Hasibuan et al., 2020). Science learning aims to help students master, understand a number of facts and concepts about natural phenomena and be able to apply them in everyday life (Saputri & Desstya, 2023). Juhaeni et al (2022) reinforced that science learning is expected to be a means for students to learn about themselves and the environment, as well as further development in applying it in everyday life.

Science learning is closely related to the ability to understand concepts. For this reason, the basic ability that is first required for students to have in science learning is the ability to understand concepts and principles (Mulyadinata et al., 2023). The ability of students to understand concepts is very important, because understanding concepts is the basis for thinking and defining and distinguishing objects that can reduce concept errors (Widiastuti, 2020). Each concept in science learning does not only stand alone, but is related to one another. It is amplified Apriyanto et al (2022) every concept inside *science* cannot stand alone, but rather correlate with other concepts.

What is often found in schools is that students often only memorize concept definitions without paying attention to the relationship between concepts. This has resulted in the ability of students to understand low concepts becoming a problem in Indonesia. According to Apriyanto et al (2022) Another problem that arises in science learning is that there are still many students who do not understand the content of the material that is already in the book in depth. In addition, there are also some books with incomplete explanations of the material or can cause confusion for students. Reinforced Budiwati et al (2023), books with incomplete explanations make students experience problems in understanding the material and there is still material that is not in accordance with the concepts that have been explained, causing misconceptions in the material.

Misconception is a concept inherent in learners that actually deviates from the scientific concept developed by severe experts (Indrajatun & Desstya, 2022). In line with opinion Widjaja & Vale (2021) Misconception is an understanding of concepts that are distorted or can be interpreted as an understanding that someone has not been in accordance with scientific interpretations or explanations from scientists. Misconceptions often occur when learners

understand a concept differently from what the teacher actually teaches or explains (Jarrah et al., 2022). It can be concluded that misconception is that the understanding of the concept of learners deviates from the actual concept.

Misconceptions are often found in students, one of which is misconceptions in science learning due to improper understanding. According to research Ojo (2024) simplification of students' thinking in science learning that is not the same as the concept thinking of experts is often the cause of misconceptions. This is reinforced by Basheer et al (2018) that scientific concepts often do not correspond to the concepts understood by students, so they have difficulty in understanding them. The characteristics of students who experience misconceptions in learning, namely they feel confident that their understanding is correct, but in reality their understanding is wrong because it does not match the experts (Ristanto et al., 2023). According to Aksoy & Erten (2022) misconceptions in science learning can be an obstacle in the process of understanding the next concept. This is reinforced by Jammeh et al (2023) science learning is inseparable from concepts that are interconnected with each other, if misconceptions tend to settle in students' minds then it can interfere with the continuous learning process.

Therefore, it is necessary to identify student misconceptions in order to minimize misunderstandings of the next concept and to determine countermeasures. In line with opinion Rahma et al (2018), if the misconception is not immediately identified it will hinder mastery of further concepts. There are several factors that underlie the occurrence of misconceptions, including structural misclassification of information obtained by students (McAfee & Hoffman, 2021). Misconceptions in learning may be caused by lack of interest in learning, low ability to understand, misapplication of learning methods and low ability to analyze questions (Fauzan et al., 2023). Misconceptions in students can be caused by several things sourced from students, the qualifications of teachers who teach, the background of parents of students to learning support facilities (Alachi et al., 2021).

If misconceptions are not overcome, the impact affects the subsequent learning process which is hampered and decreases student learning outcomes (Üce & Ceyhan, 2019). Reinforced with opinions Istiyani et al (2018) if misconceptions occur in students and are not noticed, it will lead to more concepts that are not understood by students and difficulties in answering questions that result in low learning outcomes. The occurrence of this misconception affects the learning outcomes of students, so it is necessary to identify and further analyze to overcome this problem. This identification can be done, one of which uses the level of confidence, namely the Certainty of Response Index (CRI) method. The CRI method is a way of analysis that presents questions and is equipped with a confidence scale in answering so that students can give their own answers according to their knowledge and concepts (Wulandari et al., 2022). According to Hasan et al (2021) the advantage of this method is that it can distinguish students who really understand concepts, students who do not know concepts, students who guess answers, and students who experience misconceptions.

The concept of science for elementary school children in the Kurikulum Merdeka is to provide a learning approach that is oriented to student needs. Science material is presented to stimulate learners' curiosity about the surrounding world. For example, the five senses material can be taught by the way students are invited to observe and interact with the surrounding environment using the five senses so that students understand that it is important to understand the five senses material in humans. However, based on the results of observations in the field, the five senses material in humans is one of the science materials that often causes errors. One example of error in the material of the five senses is the understanding and analysis of the structure and function of the five senses. The observation results also found that there were 70%

of students getting scores below the completeness score limit. Teachers revealed that often students have difficulty in understanding concepts, this will have an impact on learning outcomes less than optimal. There needs to be an identification of the difficulties experienced by students and the low learning outcomes of students, because this is the impact of misconceptions.

Several previous studies related to the identification of misconceptions have been carried out by several researchers, first the Indrajatun & Desstya (2022) study which identified misconceptions of human digestive material using CRI at the elementary school level obtained results that students who experienced misconceptions reached 51.33%. Second, the research of Fabilla et al (2023) which identified misconceptions of grade IV students on motion force material with the three-tier test method obtained results that students who experienced misconceptions amounted to 54.53%. As well as Purwanti & Kuntjoro (2020) research which identified misconceptions in ecological material using the four-tier test method at the high school level, it obtained results, namely students who experienced misconceptions of 61.72%. From these three studies, it can be concluded that students who experience misconceptions are more than half the number of students in the class.

In addition, there are studies that explain the causes of misconceptions in students. First, Dwilestari & Desstya (2022) research which identified misconceptions of photosynthetic matter using concept maps at the elementary school level found that the cause of misconceptions is because teachers explain the material to students less varied, causing them to find it difficult to understand the material taught by the teacher. Second, the research of Rohmah et al (2023) obtained the results that student misconceptions are caused by several factors, namely the characteristics of the learning material, knowledge that comes from within the students themselves, interest and motivation to learn that is less than within students, learning abilities and methods applied by teachers, and the use of textbooks that are less than optimal.

The explanation above shows that there are several previous studies that have identified many misconceptions at the elementary, junior high, and high school levels. Materials that have been identified include human digestion, photosynthesis, locomotion, life organization and ecology. So further research is still needed to identify other material misconceptions, one of which is the five human senses at the elementary school level and the causes of these misconceptions. For this reason, this study will identify misconceptions of students on the material of the five human senses using the CRI method in grade IV elementary school and the causes of misconceptions. The purpose of this study is to identify the level of misconceptions of the five senses material in humans using CRI and the causes of misconceptions in grade IV elementary school students.

Research Methods

This research uses a qualitative approach with a descriptive type. Qualitative research is an approach that displays assessment procedures that produce descriptive data in the form of written or spoken words of people and observed behavior. This research was conducted at SD Negeri Srimulyo 2 Sragen which was carried out during the first semester of the 2023/2024 academic year. The research subjects used were grade IV students of SD Negeri Srimulyo 2 Sragen totaling 15 children consisting of 6 male students and 9 female students.

The data collection method in this study used written test instruments, interviews, and documentation. The research instrument used is a multiple-choice test of 15 questions accompanied by CRI that has been tested with a validity value of > R_{table} which is 0.514, and reliability is 0.870. Interviews are conducted by students to confirm answers on multiple-choice

tests, and are used to determine the source of the cause of misconceptions. Documentation is a record of events that have occurred in the form of writing and photos used for information that can support research. The wetness test in this study uses the triangulation method, which is a data collection technique by comparing information or data in a different way (Sugiyono, 2018). Triangulation of the method is carried out by checking students' answers from multiple-choice tests accompanied by CRI first, then compared with the results of student interviews.

The data was analysed with reference to CRI categorization which was used to measure learners' level of confidence about the answers they gave. How to determine the CRI value based on 6 scales compiled by Hasan, Bagayoko, and Kelley (1999: 296), then analyze the data from the answers given (true or false) with CRI values (high or low), so that students who understand the concept (P), misconception (M), and do not understand the concept (TP) can be distinguished, after obtaining the calculation of the percentage of misconceptions, the percentage level of misconceptions can be categorized into several categories of low misconceptions, medium or high. The degree of certainty of answers is reflected in the given CRI scale, the criterion table of CRI values is presented in the following table 1.

Table 1. CRI Value Criteria

CRI Value	Criterion
0	Overall Guessing Answer
1	Some Answers Guess
2	Not sure
3	Almost Sure
4	Almost Understand
5	Very Understand

The number 0 in the CRI value indicates that students do not know at all about the concepts to answer a question asked, so the answers that students answer on the worksheet are ensured to be answered by guessing totally. Conversely, if the number 5 on the CRI value indicates high confidence by students in answering the questions asked (there is no element of guesswork in answering). According to Yolanda (2021) This CRI asks students to assess themselves the certainty that students have in choosing rules, principles, and laws that have been ingrained in their minds so that students can determine the answer to a question.

After obtaining CRI results, then students are grouped into several categories. Students answer correctly and have a low CRI value (0-2) indicating that the correct answer in students is a factor of luck, namely by guessing (MN). If the student's answer is correct and has a high CRI value (3-5), it indicates that the student has the correct concept of knowledge (PK). If students have the wrong answer and a low CRI value (0-2), it indicates that students do not understand the concept of correct knowledge (TPK). If the answer is wrong but the learner has a high CRI value (3-5), then it can be ascertained that the learner has a misconception (M)(Yolanda, 2021).

The calculation results of the CRI are presented in percentage form. By using the formula:

$$P = \frac{f}{n} \times 100\%$$

Information:

P = Percentage of students (%)

f = Number of students in each group (MN, PK, TPK, M)

n = Total number of learners

Results and Discussion

Based on the research that has been done, the results of identifying misconceptions in students of SD Negeri Srimulyo 2 Sragen on the material of the five human senses using CRI and interviews. It is found that the average result of student misconceptions is greater than the average student who understands concepts. The results of data analysis regarding the average understanding of students on the material of the five human senses are presented in table 2.

Tabel 2. Average Comprehension of Students

Category	Precentage
Guessing (MN)	17,47%
Understanding the Concept (PK)	30,33%
Don't Understand the Concept (TPK)	10,27%
Misconception (M)	41,93%

Based on table 2, the results of data analysis regarding students' understanding of the five human senses material shows that, students by answering guesses by 17.47%, students who understand concepts by 30.33%, students do not understand concepts by 10.27%, while students who experience misconceptions reach 41.93%.

The percentage of misconceptions can be seen from each indicator of the questions tested. In this study, each question was grouped into 5 indicators consisting of understanding and types of human senses, the function of the five human senses, the structure of the five human senses, how the five human senses work, and caring for the five human senses. The percentage of elaboration of student misconceptions in each indicator can be seen in table 3.

Tabel 3. Percentage of Misconceptions in Each Indicator

Indicators	Guess (MN)	Understanding the Concept (PK)	Don't Understand the Concept (TPK)	Misconceptions (M)
	Percentage (%)	Percentage (%)	Percentage (%)	Percentage (%)
Understanding and Types of Human Five Senses	26,67	53,33	0	20
Functions of the Five Human Senses	16	14,33	15	54,67
The Structure of the Five Human Senses	15	26,67	25	33,33
How the Five Human Senses Work	28,33	31,67	5	35
Caring for the Five Human Senses	7	46,67	6,33	40

Based on table 3, it can be known the percentage of students who guess, understand concepts, do not understand concepts, and misconceptions in each indicator. The highest percentage of understanding concepts lies in the first indicator, namely understanding and types of human senses with a percentage of 53.33%. The percentage of students who do not understand the highest concept in the human sensory structure indicator is 25%. The highest percentage of students by answering by guessing is the indicator of how the five human senses work, which is 28.33%. The percentage of students who experienced the lowest

misconception was in the indicator of the structure of the five senses with 33.33%, while the highest misconception in the indicator of the function of the five senses of humans was 54.67%.

After a written test to test students' misconceptions, followed by interviews with students to strengthen the data. Based on this, a description of the concept of student misconception in each indicator is obtained which can be seen in table 4 below.

Tabel 4. Description of Student Misconceptions on Each Indicator

Indicators	Misconceptions	Correct Answer	Percentage
Understanding and Types of Human Five Senses	The five senses of touch are the hands	The five senses of touch are the skin	20%
Functions of the Five Human Senses	1. What is used to feel heat and cold is the tongue 2. The five senses play an important role in driving is Through hearing that allows you to hear the horn	1. What is used to feel heat and cold is the skin 2. The five senses play an important role in driving is Through sight that helps you see traffic	54,67%
The Structure of the Five Human Senses	1. The main function of the eardrum is to collect sounds from the surrounding environment 2. The part of the eye responsible for regulating the amount of light is the Retina	1. The main function of the eardrum is to transmit sound waves 2. The part of the eye that regulates the amount of light is the Pupil	33,33%
How the Five Human Senses Work	1. How do our ears convert sound into signals that the brain can understand? By using the auditory bone 2. Why do we feel a spicy taste when eating chili? Because hot pepper has a strong smell.	1. How do our ears convert sound into signals that the brain can understand? By sending sound waves directly to the brain 2. Why do we feel a spicy taste when eating chili? Because chili peppers have substances that stimulate the receptors of our five senses.	35%
Caring for the Five Human Senses	The importance of taking care of our hearing is so that we can hear louder.	The importance of taking care of our hearing is so that we can hear sounds clearly and communicate well.	40%

Table 4 above describes the misconceptions of students on the material of the five human senses based on the indicators prepared.

The average category of students who only guess (MN), understand the concept (PK), do not understand the concept (TPK), and misconceptions (M) in the material of the five human senses is around 17.47%, 30.33%, 10.27%, and 41.93%. This explains that the indicator of question number 2, namely the function of the five human senses, has the most dominant misconception or the most compared to other indicators. Although misconceptions in this five senses material with an average percentage of 41.93% or not

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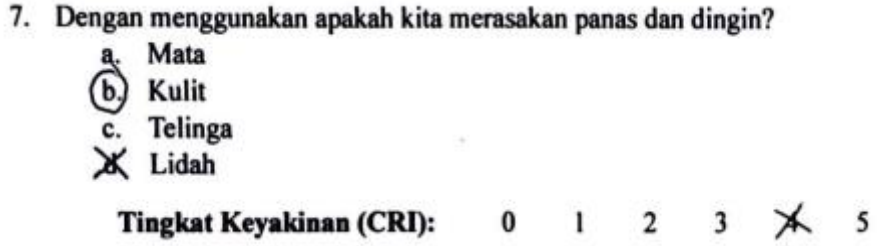
exceeding 50% which means that it is still in the level of moderate misconceptions, in fact there is not a single indicator of students who do not experience misconceptions.

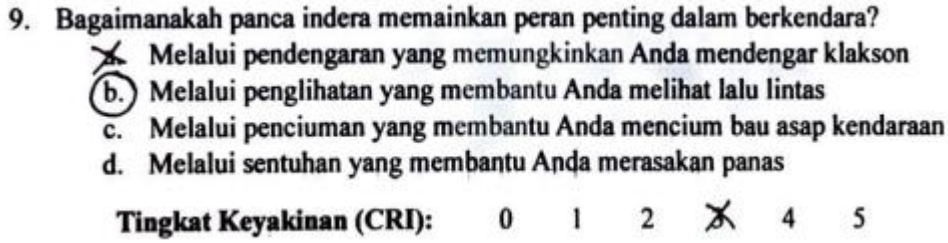
The highest misconception in this study was found in the indicator of human sensory function as much as 54.67%. This shows that there are 8 students experiencing misconceptions. The highest form of misconception of students in answering questions can be seen in figure 1 and figure 2 below.


7. Dengan menggunakan apakah kita merasakan panas dan dingin?
   a. Mata
   b. Kulit
   c. Telinga
   d. Lidah

Tingkat Keyakinan (CRI): 0 1 2 3 4 5

Figure 1. Highest Misconception

In figure 1 it is one of the misconceptions of students on the function of the five human senses. It can be seen that learners answer that the five senses used to sense cold and heat are the tongue. But the correct answer should be skin. Based on the results of interviews, this is because according to them the tongue is used to feel the heat and cold of food when eating. So that the answer is wrong, the student determines the answer with 3 confidence (almost certain). Students answer the question with a false initial understanding, students understand that the senses used to sense heat and cold are the tongue, but the correct answer is the skin. This is in line with Wanah et al (2023) human senses that make it possible to feel something rough, hot, smooth, and cold on the surface of objects through the human body, namely the skin. In this study, it is obtained if the initial understanding of students is wrong will result in students answering the wrong questions. In line with the research of Nurma'ardi et al (2022), the initial understanding of learners has an important role in determining their learning outcomes. If the initial understanding of students is not correct, this can make it difficult for them to answer the questions.


9. Bagaimanakah panca indera memainkan peran penting dalam berkendara?
   a. Melalui pendengaran yang memungkinkan Anda mendengar klakson
   b. Melalui penglihatan yang membantu Anda melihat lalu lintas
   c. Melalui penciuman yang membantu Anda mencium bau asap kendaraan
   d. Melalui sentuhan yang membantu Anda merasakan panas

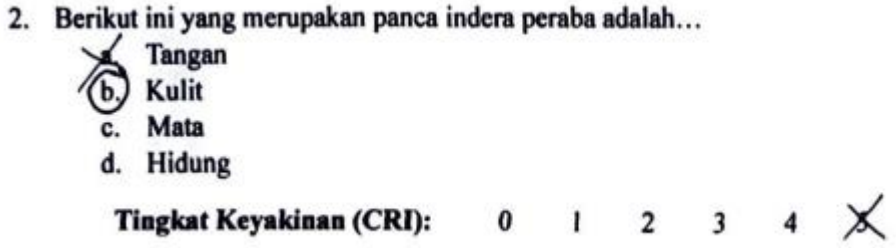
Tingkat Keyakinan (CRI): 0 1 2 3 4 5

Figure 2. Highest Misconception

In addition, in figure 2, it shows that learners also answered incorrectly that the senses that play an important role in driving are through hearing to hear the horn. Students answer the question with a confidence level of 3 (almost certain). When interviewed, the reason they answered hearing to listen to the horn became an important role when driving because the horn is an important part in the vehicle so that accidents do not occur. Their initial understanding is not right because in driving because the sense of vision should play an important role when driving to see traffic signs. Errors that arise are also caused by the initial understanding of students who are wrong. As explained by Pratiwi et al (2022) Not

understanding concepts in the early stages of learning can lead to repeated mistakes in subsequent learning, reflected in incorrect answers from learners.

The lowest misconception in this study was found in the indicators of understanding and types of human senses, which was as many as 20% or only 3 students who experienced misconceptions. The form of student misconception is in the form of incorrectly answering the questions shown in figure 3 below.


2. Berikut ini yang merupakan panca indera peraba adalah…
   a. Tangan
   b. Kulit
   c. Mata
   d. Hidung

Tingkat Keyakinan (CRI): 0 1 2 3 4 5

Figure 3. Lowest Misconception

In figure 3 above is a mistake in the concept of students on indicators of understanding and types of five senses. Learners answer the hand as a sense of touch, while the correct answer is skin. Based on the results of interviews with students, they stated that they misinterpreted that the sense of touch is the hand because the hand is used to touch an object. Students answer the question with 5 convictions (very understanding). This shows that students who feel they understand do not necessarily answer the questions presented. This is in line with research Riti et al (2022) Students feel that they already understand the material taught, but are wrong in answering the questions given. Student errors usually arise due to lack of accuracy from students, such as not paying attention to the question sentences given. The accuracy of students in answering questions is also a factor that supports students to be able to answer questions (Ramadhini &; Kowiyah, 2022). Amplified according to Rosdianah et al (2019) Supporting factors for student success in answering questions are internal factors, for example students' ability to understand the material and students' accuracy in examining questions.

Based on the results of interviews with students, on the indicators of the structure of the five human senses, they also experienced misconceptions. They argue that the structure of the five human senses is very much and difficult to memorize, so there are often errors in remembering their functions. Similar to the fourth indicator, namely the workings of the human senses, students experience misconceptions because they find it difficult to memorize them. Misconceptions in learners can be caused by various factors such as the factors of the learners themselves, teachers and their teaching methods. In line with research Adi &; Oktaviani (2019) The most dominant cause of misconceptions that occur in students is the learners themselves, then caused by external factors such as teachers and learning references used. In this study, if you see the cause of the misconception due to factors from yourself, namely the difficulty of students in memorizing the material taught.

The most dominant cause of misconceptions in the material of the five human senses is caused by difficulty memorizing structures and functions and the discovery of new terms and difficult to understand by students. Based on interviews with students who said that many sensory materials are memorized such as memorizing structures in the ears or eyes, then required to memorize the functions of each of these five sensory structures. For example, students have difficulty in distinguishing the cornea or iris or pupil, which causes misconceptions. Misconceptions that often arise in learners are caused by their difficulties in

memorizing and remembering the material taught (Jusniar et al., 2020). In line with research Amdani et al (2022) It is concluded that students have not been able to mention the types and functions of the human senses because of the low interest in learning. Reinforced in research Suryawan et al (2020) The incomprehension of students in memorizing material is a misconception that can affect their learning outcomes. For this reason, students need to improve the ability to understand the material by memorizing it, because if students memorize the material, they can more easily apply the knowledge in the context of real situations, develop critical skills, and achieve success in various aspects of learning.

In addition, it requires a level of activeness and effort of learners to learn more intensively in understanding concepts. Through observations, it is also obtained that students tend to use rote memorization techniques rather than exploring understanding concepts when learning. In line with opinion Haerunnisa et al (2022) Students who learn with memorization techniques will tend to forget concepts and solve problems incorrectly, compared to students who understand concepts in the material. This shows that if students only depend on memorization, it can cause misconceptions, especially in students who are weak in memorizing sensory material because this material is not only memorizing but also understanding it.

The second cause of misconception is the low interest in learning students. Based on observations and interviews, it was found that students' interest in learning was still low, when asked if they would relearn the material offered at home school, most students answered no, and preferred to play. Interest in learning also has a significant impact on the likelihood of misconceptions. Learners who show a high interest in learning generally have lower levels of misconceptions compared to those who are less interested in learning, which may be due to lack of attention to the teacher's explanation and lack of seriousness in learning (Mukhlisa, 2021). This research shows that interest in learning strongly influences misconceptions. Students with high interest in learning will certainly relearn the material independently at home or at least if the interest in learning is high, students will pay attention to the material taught by the teacher seriously. In this study shows that students with low interest in learning, when at home tend not to understand the material that has been taught.

Interest in learning is not only influenced by the students themselves, but also influenced by the teacher's teaching methods. According to (Setiawan & Rusmana (2020), inappropriate teaching methods applied by teachers can also be a cause of misconceptions in students. Based on observations, teachers in this study used the lecture method in delivering material, and in my opinion the use of the lecture method for human sensory material is not appropriate. This can lead to boredom among learners, which in turn can reduce their interest in learning. In addition, teachers can use other references in the learning process, not only focused on books, and can use such as learning videos or other learning media. The use of appropriate and fun learning media for students can increase their interest in learning and minimize the occurrence of misconceptions in students Siong et al (2023) in this study, it was obtained that the lecture method was not appropriate for students. There needs to be a change in teacher teaching methods, such as using media in the form of learning videos of five sense materials that can make it easier for students to remember the material and increase their interest in learning.

Conclusion

Based on the results of research that has been carried out regarding the analysis of misconceptions on the material of the five human senses with the Certainty of Respondent Index

(CRI) method in grade IV SD Negeri Srimulyo 2 Sragen, it was concluded that as many as 41.93% or there were 6 students experiencing misconceptions. The highest misconception of this study is on the indicators of the function of the five senses of human beings, while the lowest misconception is on indicators of understanding and types of five senses. Then in this study it was also obtained that there were several factors that resulted in misconceptions, namely the difficulty of students in memorizing the material, the lack of interest in learning students, and inappropriate teacher teaching methods. For this reason, there needs to be an evaluation for teachers to increase the use of learning methods and media in making it easier for students to memorize material and increase interest in learning in order to minimize the occurrence of student misconceptions. The results in this study can be taken into consideration that the need for improved learning can be in the form of increasing the use of methods and media in learning to minimize the occurrence of misconceptions. Research is only limited to identifying misconceptions using the CRI method and describing the causes of misconceptions in grade IV elementary school students, this research is also limited to the material identified. The recommendation in this research is to add a wider subject matter and further research that covers a wider level.

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