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Analysis of the Level of Motivation to Learn Science Considered from 4 Main Indicators: SE, IE, CDL, and CCI

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Abstract. *Learning motivation is one of the important factors that influence the success of the learning process, especially in Natural Science (IPA) subjects that require an in-depth understanding of concepts. This study aims to analyze the level of motivation to learn science in 5th-grade students at MIN 3 Lampung Utara. Learning motivation is measured based on four main indicators, namely Self-Efficacy (SE), Interest and Enjoyment (IE), Connection to Daily Life (CDL), and Cross-Cultural Interactions (CCI), which are adapted from Ginzburg & Barak's research (2023). Data were collected by distributing questionnaires directly to students, and the data were analyzed using the Rasch model. The results showed that the motivation to learn science at MIN 3 Lampung Utara was in the high category, with an average percentage of motivation of 71.67%. The results of the analysis using the Rasch model show person reliability of 0.78 and item reliability of 0.85, which indicates that the instrument used has good consistency in measuring science learning motivation. Furthermore, an in-depth analysis of the four indicators showed that overall student motivation was high. However, the Connection to Daily Life (CDL) indicator, which reflects students' ability to connect science material with daily life, showed the lowest score compared to other indicators. This finding has important implications for educators and curriculum developers to improve the relevance of science learning to students' daily lives. Therefore, further research is needed to explore the factors that influence the low connection between science materials and students' daily life contexts.*

Keywords: *Cross-Cultural Interactions, Connection to Daily Life, Interest and Enjoyment, Motivation for Learning Science, Self-Efficacy*

INTRODUCTION

Primary education is the initial phase in the formation of students' character and academic abilities. (Junaidi & Rohmani, 2024; Surtini & Tatang, 2024). In this phase, students not only gain an understanding of various fields of science but also ethical values and social skills that will be the foundation for their future. One of the fields of study that plays an important role in basic education is Natural Science (IPA) (Thanh, 2023; Vincentas, 2022). Science subjects aim to develop critical, logical, and scientific thinking skills in students (Ana et al., 2021; Sigit et al., 2024). Students are invited to understand nature and scientific phenomena around them through theoretical and practical approaches. To achieve these goals, student learning motivation is needed because strong motivation can increase students' active participation in the learning process (Gabriela, 2022; Rahmat & Asrial., 2022).

The development of students' academic abilities at the primary school level is closely related to the study of science, as this subject provides the basis for more complex scientific understanding at the next level of education (Fanglei, 2024; Nanda et al., 2023; Thanh, 2023). Through science learning, students are trained to connect scientific concepts with real phenomena that they encounter daily. The critical, logical and analytical thinking skills developed through science not only contribute to students' academic achievement but also form a mindset that is beneficial in their future lives (Asrizal & Usmeldi, 2023; Roxana et al., 2024). In addition, science learning also helps students develop problem-solving skills, which is an important foundation for facing

challenges in various aspects of life (Anna et al., 2024; Pathiah et al., 2023; Thanatcha et al., 2024). By understanding science concepts, students learn to identify problems, analyze data and formulate evidence-based solutions. This not only strengthens their understanding of science but also contributes significantly to their overall academic development (Ann et al., 2022; Julie et al., 2023).

Motivation to learn in science subjects at the elementary level is very important because it affects how students receive and process the material taught (Dhea et al., 2024; Oksana & C., 2023). In elementary school, students' interest in science is often fueled by their curiosity about the natural environment around them. However, the challenge of understanding complex scientific concepts can be demotivating (Khoirun, 2022; Morris & Jong, 2020). Therefore, teachers need to use various creative methods to maintain students' interest, such as experiment-based learning and simple projects. Good learning motivation will encourage students to be more active in asking questions, participating in discussions, and engaging in challenging practical activities so that students can develop critical and analytical thinking skills early on (Cucu et al., 2023; Tysa et al., 2022).

Motivation can be measured through various methods, one of which is by using a questionnaire specifically designed to assess student learning motivation (Erik, 2023; NNajwa et al., 2022). These questionnaires usually contain questions related to students' interest, effort and perseverance in achieving their learning goals. Some studies have developed motivation measurement tools, such as the Motivated Strategies for Learning Questionnaire (MSLQ), which is specifically used to evaluate various aspects of motivation, including learning goals, task value, and control over learning outcomes (Erna & Sarah, 2023; Yasuhiro et al., 2021). Tools like this help educators and researchers understand the factors that influence student motivation so that appropriate interventions can be made to increase enthusiasm for learning (Heng et al., 2024; Nathaniel & Benjamin, 2020; Yijia, 2024) .

This study measured science learning motivation at MIN 3 Lampung Utara, one of the leading primary schools in the area. MIN 3 Lampung Utara is a public Islamic school located in North Lampung Regency, Lampung Province, Indonesia. The school is one of the primary education institutions that provides Islamic-based teaching and refers to the national curriculum. MIN 3 Lampung Utara plays an important role in educating students at the primary level, especially in the fields of religious and general sciences, including subjects such as science, which is the focus of your research related to student learning motivation.

At MIN 3 Lampung Utara, science learning is an important focus, especially as the subject demands deep understanding as well as good analytical skills. Teachers have a big role to play in maintaining students' learning motivation, both through engaging teaching methods and by providing emotional and academic support. Supportive school facilities such as libraries and adequate classrooms can play a role in creating a positive learning atmosphere. However, despite the school's physical conditions, learning motivation is not only influenced by the environment but also by the internal factors of the students themselves. Therefore, research is needed to deeply analyze the factors that influence science learning motivation at MIN 3 Lampung Utara.

Several studies have designed questionnaires to measure science learning motivation in schools, one of which is by (Roald et al., 2023) In this study, the researchers tested the validity and reliability of the science learning motivation instrument for fifth-grade students at SDIT BPMAA Pekanbaru City, which was developed by Aminatun (2019). The instrument measures five indicators of motivation, namely perseverance, tenacity in facing difficulties, interest and attention, achievement, and independence in learning. By involving 25 students through purposive sampling, the data were analyzed using SPSS version 23.00. The validity test results show that the count value ranges from 0.614 to 0.762, exceeding table = 0.396 at 5% significance, while the instrument reliability shows a value of 0.601, so the instrument is declared valid and reliable to measure student learning motivation.

Previous research relevant to this study includes research conducted by (Nasir et al., 2023) in their research the results showed that class and gender did not affect students' science learning motivation, with the average motivation classified as good. Female students are superior in self-

efficacy, active learning strategies, science learning values, and performance goals, while male students are dominant in achievement goals and stimulation of the learning environment. However, students' performance goals were weak, indicating that learning motivation is more oriented towards social recognition than personal achievement improvement. Then another study relevant to this research was conducted by (Zhang et al., 2023). In this study, the results showed that the structure of student science motivation in the United States was more in line with the four-factor model than the three or one-factor model. These factors include self-concept, task value (intrinsic and utility), and sense of relatedness. By integrating situational expected value theory (SEVT) and self-determination theory (SDT), this study confirms the internal validity of the model. The findings highlight the importance of the sense of relatedness as an interpersonal aspect in science learning motivation, with evidence validated using TIMSS data.

The main objective of this study is to analyze the level of motivation to learn science in grade 5 students at MIN 3 Lampung Utara through a questionnaire based on four main indicators, namely self-belief, interest and pleasure, connection to daily life, and interaction between cultures. By understanding the level of student motivation through these indicators, teachers and schools can get a clearer picture of the factors that influence the success of science learning. In addition, the results of this study are expected to provide valuable input for the development of more effective learning strategies so that students are not only able to understand science materials better but are also motivated to continue improving their academic abilities.

The importance of this research in the field of education lies not only in the efforts to improve student learning motivation but also in its impact on broader education policy. By understanding the factors that influence students' learning motivation, the results of this study can inform decision-making in curriculum development and more effective teaching methods. In addition, this research also has the potential to contribute to the development of training programs for teachers, so that they are better prepared and able to face challenges in the learning process. Thus, this research is expected to provide useful recommendations for improving the quality of education at MIN 3 Lampung Utara, as well as supporting the achievement of better educational goals at the local and national levels.

METHOD

The research method is described in several sections, including the study design, sampling technique, inclusion and exclusion criteria, and data collection method. The following is an explanation of each part of the research method.

Study Design

This research is descriptive with a cross-sectional design. Research with a cross-sectional design is a type of observational research conducted at one point in time, where data is collected from respondents simultaneously (Anirban et al., 2023; Na et al., 2024). This design was chosen because it is efficient and does not require a longitudinal approach which takes more time and resources. In this study, the cross-sectional design is suitable for describing the characteristics or relationships between variables in a particular population, such as students at a particular grade level. It can be used descriptively to map population characteristics as well as analytically to explore relationships between variables. The research data were collected simultaneously on Friday, September 20, 2024, in one day, thus providing a comprehensive and efficient picture of students' learning motivation at that time.

Sampling

This research was conducted on Friday, September 20, 2024, at MIN 3 Lampung Utara. The researcher selected three classes from a total of six available classes as research samples. Each class consisted of 26 students, so the total number of students from the three classes reached 78 people. The questionnaires were distributed to all students in the three selected classes, but because some

students were absent on the day of implementation, only 7 questionnaires were collected in a fully filled condition.

Inclusion Criteria

The inclusion criteria in this study are the provisions used to determine students who are eligible to become research participants. In this case, the inclusion criteria include several important things so that the data obtained are accurate and relevant. First, the students included were grade 5 students at MIN 3 Lampung Utara. This means that only students who are at the grade 5 education level are eligible to participate. Second, the students had to actively participate in science lessons, meaning that they routinely participated in the science learning process in class. This active involvement is important so that students can answer the questionnaire with a good understanding of the science learning they participate in. Third, the students included must be willing to participate in the research by filling out the questionnaire voluntarily. This willingness shows that students understand the purpose of the research and are willing to provide the data needed. Finally, eligible students were those who were present at school when the research was conducted. Attendance at the time of the study is very important to ensure that students can fill out the questionnaire under the supervision of the researcher and under the same conditions as other respondents.

Exclusion Criteria

Exclusion criteria were used to exclude students who did not meet certain conditions in this study. First, students who were not present at the time of the study were excluded, because they could not fill in the questionnaire at the same time as other students, which risked disrupting the consistency of the data. Second, students who did not complete the questionnaire were also excluded from the analysis, as incomplete answers cannot provide an accurate picture of learning motivation. Thirdly, students who have serious barriers, such as difficulty understanding instructions or cognitive limitations, are also excluded, as this may affect the quality of the data generated. With these criteria, the research will obtain more valid and representative data.

Data Collection

Data collection in this study was carried out by distributing questionnaires designed to measure the science learning motivation of grade 5 students at MIN 3 Lampung Utara. The data collection process began with the distribution of questionnaires to all 72 grade 5 students who were divided into three classes. Before filling out, the researcher gave a brief explanation of the purpose of the study and instructions on how to fill out the questionnaire, so that students could understand the questions well. Questionnaire filling was carried out in the classroom with direct supervision from researchers and teachers, to ensure that students filled out the questionnaire independently without any influence from other parties. Students were given sufficient time to complete the questionnaire so that they could answer each question carefully. After all students finished filling out the questionnaires were collected and compiled for further analysis. The data collected through this questionnaire is expected to provide an accurate picture of the level of students' science learning motivation based on four indicators, namely:

First indicator: Self-confidence

The first part of the questionnaire consisted of questions that measured students' self-confidence in learning science. These questions covered how much confidence students have in their ability to understand science material, their confidence in facing learning challenges, and how they assess themselves in overcoming difficulties related to science material in class.

Second Indicator: Interest and Enjoyment

The second section of the questionnaire focuses on students' interest and enjoyment of learning science. The questions in this section are designed to explore the extent to which students feel

interested and enjoy learning science and how enthusiastic they are about participating in learning activities, both inside and outside the classroom.

Third indicator: Connection to daily life
Furthermore, the third section includes questions that assess the relationship between science lessons and students' daily lives. In this section, students are asked to assess how relevant the science material they learn is to the events and phenomena they encounter in their daily lives and whether their understanding of science helps them deal with real situations.

Fourth indicator: Cross-cultural interactions
The fourth section of the questionnaire focused on intercultural interaction in the context of science learning. The questions in this section were designed to explore how students understand and appreciate cultural differences through science learning. Students were asked to rate their knowledge of how science concepts are taught in other countries and whether they felt that intercultural interaction could enrich their understanding of the subject matter.

Data Analysis
This research focuses on analyzing the level of motivation to learn science of grade 5 students at MIN 3 Lampung Utara by considering four main indicators, namely self-confidence, interest and pleasure, connection to daily life, and intercultural interaction which is useful to provide deep insight into the factors that influence student motivation in learning science and its implications for the development of more effective teaching methods in the educational environment. This research used a descriptive qualitative approach (Edward & K., 2023; Gail et al., 2023). The purpose of using a descriptive qualitative approach is to identify and describe trends and variations in populations, create new measures of key phenomena, or describe samples in studies that aim to identify causal effects; description plays an important role in the scientific process in general and educational research in particular (Kassandra et al., 2020; Omar et al., 2022). Descriptive analysis identifies patterns in the data to answer questions about who, what, where, when, and to what extent (Altukhi & Aljohani, 2023; Yihang, 2023). This guide explains how to approach, conduct, and communicate quantitative descriptive analysis more effectively (Kheirabadi & Mirzaei, 2019; Mondal et al., 2022).

The Rasch measurement model is used to analyze data, both to assess the quality of instruments and the responses of respondents (Sherwin & Balbuena, 2023; Su et al., 2022). This analysis can explain item difficulty with precise measurements, detect item fit, and identify item bias or differential item functioning (DIF) (M. et al., 2024; Münevver, 2023). Using WINSTEPS version 5.2.4 (Linacre, 2000), the data were mathematically transformed into logits through the logarithm function of the participants' probability responses. This logarithm function is used to transform raw ordinal data, such as Likert data, into logits (Hüner & Yahya, 2020; Roald et al., 2023). This approach also assesses the overall fit of the instrument as well as respondent fit. In contrast to classical test theory (CTT), which relies on scores that do not provide accurate measurements, Rasch models provide more precise and latent results (Amal et al., 2022; Siti et al., 2019). Rasch models are preferred over other methods, such as CTT, because of their ability to provide measurements that are independent of the sample population and data distribution. In CTT, the validity and reliability of the instrument are highly dependent on the characteristics of the sample, so the results of the analysis may change if the sample is different (Enas et al., 2020; Sri et al., 2022). In contrast, the Rasch model ensures that the items analyzed remain consistent regardless of sample changes. In addition, Rasch offers the ability to detect item and respondent matches better, provide estimates of item difficulty and respondent ability on the same scale, and handle ordinal data with logit transformation, making it more suitable for advanced analysis (Mohd et al., 2020; Vegi et al., 2022) The WINSTEPS software results were used to test the level of motivation to learn science based on four indicators.

RESULT

As a result of data collection regarding the level of motivation to learn science among students, especially at MIN 3 Lampung Utara, a questionnaire was distributed based on four main indicators. From the questionnaire distributed, 72 5th-grade students of MIN 3 Lampung Utara expressed their willingness to participate by filling out the prepared questionnaire. The data from these valid respondents were then processed using Winstep software, which was designed to analyze the reliability of the responses given by the students as well as the reliability of each item contained in the questionnaire. Through this statistical approach, the results obtained provide an overview of how grade 5 students at MIN 3 Lampung Utara assess their level of motivation to learn science based on four predetermined indicators, and these results provide an important basis for understanding their perceptions and overall level of motivation to learn science

Respondent and Item Reliability Levels

The results of data analysis on reliability and item respondents using Winstep software are summarized in Table 1.

Table 1. Fit Statistic and Separation Index

	Category	Skor
Person	Reliability	0.78
	Outfit mean-square (MNSQ) in Logits	1.01
	Outfit standardized (ZSTD) in Logits	-0.2
	Separation	1.89
Item	Reliability	0.85
	Outfit mean-square (MNSQ) in Logits	1.01
	Outfit standardized (ZSTD) in Logits	-0.1
	Separation	2.41

Based on the analysis presented in Table 1, the instruments used show satisfactory results. Respondent reliability (Person Reliability) has a value of 0.78, which means that respondents' answers are quite consistent, although they can still be improved. Meanwhile, Item Reliability of 0.85 indicates that the items are able to measure constructs with high consistency. In terms of fit with the Rasch model, MNSQ Outfit values for respondents and items of 1.01 each indicate that both respondents and items fit the model, as the values are close to the ideal number of 1. In addition, ZSTD Outfit values for respondents (-0.2) and items (-0.1) are in the normal range (-2 to +2), which indicates that there are no significant deviations from model expectations. Furthermore, the Person Separation value of 1.89 indicates that the instrument is able to distinguish respondents with different ability levels, which, in this case, indicates two ability levels. Meanwhile, the Separation Item value of 2.41 indicates that the instrument can also separate question items based on difficulty level, which, in this case, indicates three levels of difficulty. Overall, these results indicate that the instrument has good reliability, conformity to the Rasch model, and a good enough ability to clearly and accurately distinguish between respondents and items. The Wright Map below illustrates the relationship between a person's ability and item difficulty, providing a visual representation of how well the items align with the respondents' abilities.

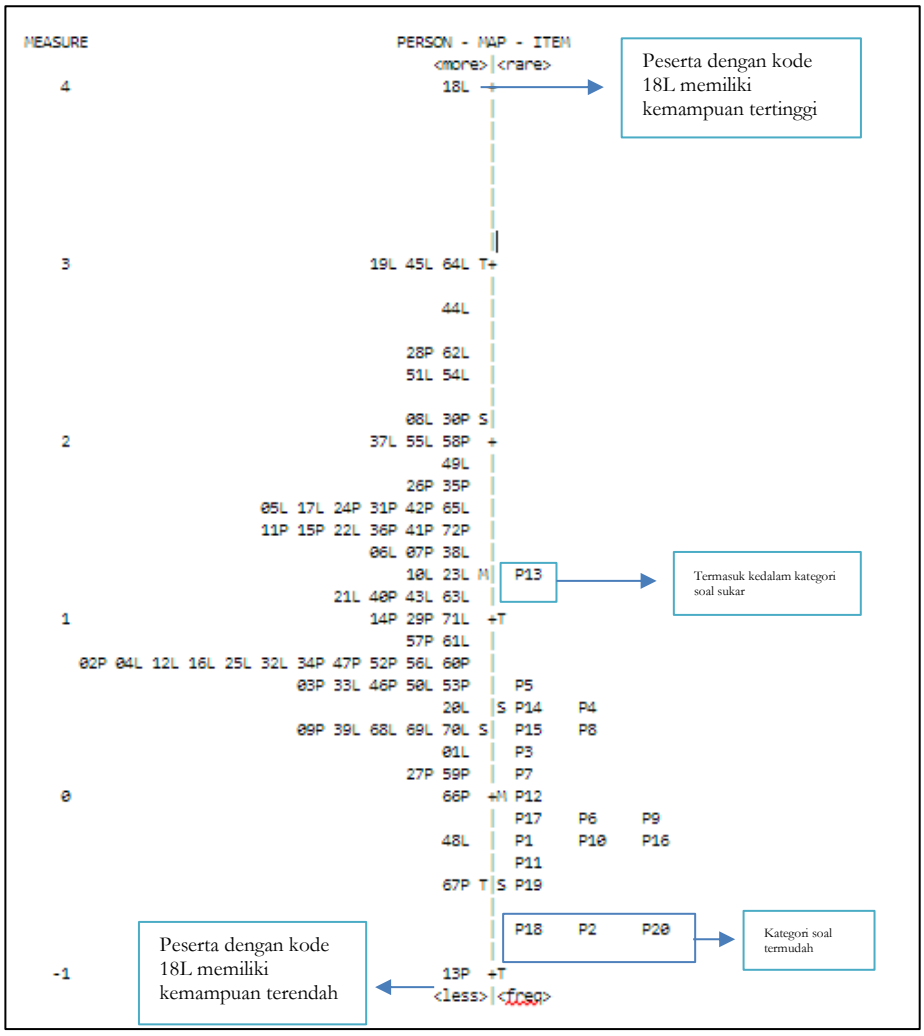


Figure 1. Wright Map Person-Item Map

Based on the Wrightmap generated from the analysis using Winstep software, it can be concluded that the distribution of student ability and item difficulty is on a balanced logit scale. The vertical axis of the Wrightmap shows the logit scale, where positive values indicate high student ability or item difficulty, while negative values indicate low ability or difficulty. On the left side of the Wright map, there is a distribution of student ability. The student coded "18L" has the highest ability (logit around 4), while the student coded "13P" shows the lowest ability (logit around -1). This distribution reflects the variation in the ability of grade 5 students at MIN 3 Lampung Utara to understand science material. On the right side of the Wright map, the level of item difficulty is visualized. The item coded "P13" is one of the most difficult (logit around 2), while items coded "P18" and "P20" are among the easiest (logit around -1). The center line on the Wrightmap is a reference for evaluating the match between student ability and item difficulty. If the student's position is above a question item, then the student is likely to be able to answer the question correctly. Conversely, if the student's position is below an item, then the item is considered difficult for the student. The results of this Wrightmap show that most students have abilities that match the difficulty level of the questions given. However, there are some very high-ability students (such as student "18L") who can easily answer almost all questions, while low-ability students (such as student "13P") may need additional support in understanding the material. The implication of this analysis is the need to adjust the questions to ensure the match between students' ability and the difficulty level of the questions, as well as giving more attention to low-ability students to improve their understanding. With this visualization, it can be concluded that Wrightmap is a very useful

tool in evaluating the suitability of question items for students' abilities, as well as providing a detailed picture to improve the quality of science learning in the classroom.

Respondent's Probability Levels on Item

Figure 1 below is a graph of Category Probabilities in the Rasch Model showing Andrich thresholds or transition points between response categories. The X-axis represents the difference between individual ability and item difficulty, while the Y-axis shows the probability of each response category (1, 2, 3, 4). The star (***) marks the threshold at which the probabilities switch between categories. This graph visualizes how response categories are used and how well items separate individuals based on their ability

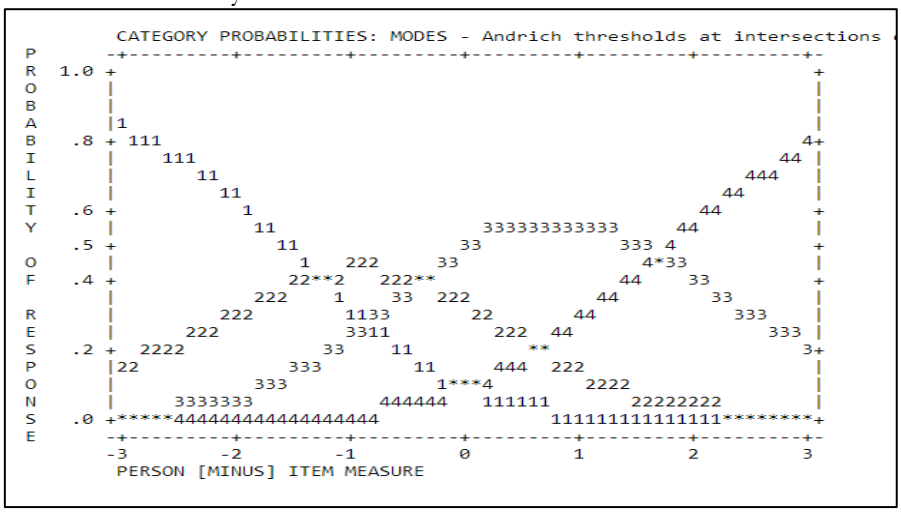
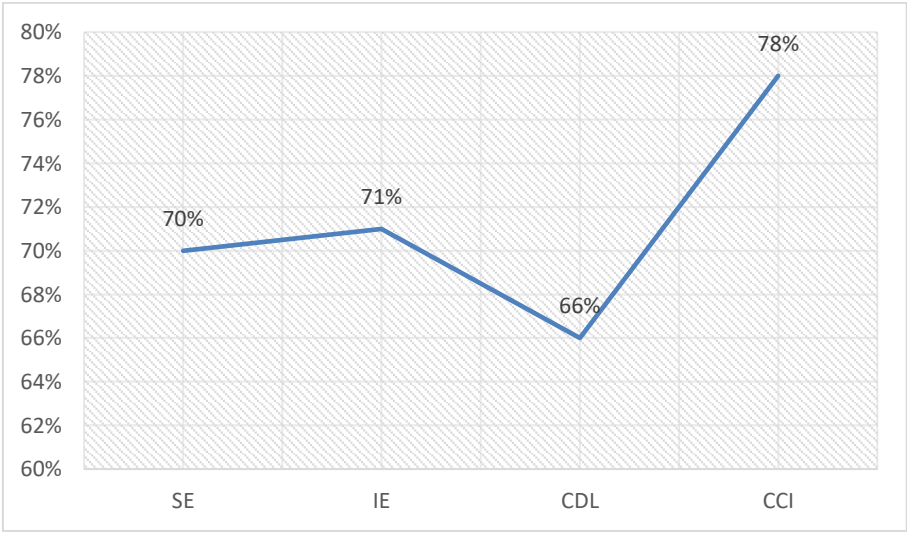


Figure 2. The probability level of respondents to the items of science learning

Motivation Level of Science Learning at MIN 3 Lampung Utara



Graph 1. Graph of overall motivation to learn science at SDIT Insan Robbani

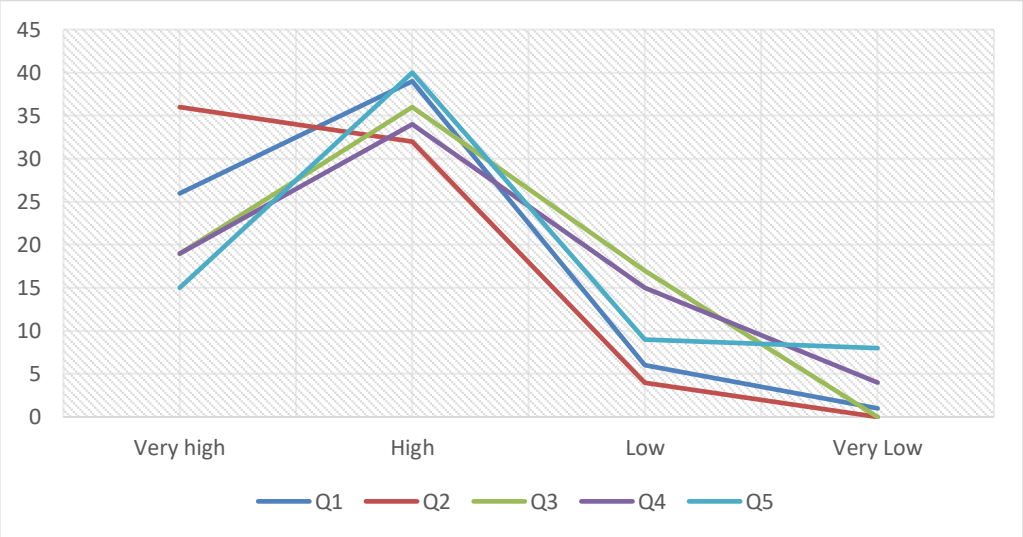
The graph above shows the science learning motivation of MIN 3 Lampung Utara students based on four indicators. Self-Efficacy (SE) got a percentage of 70%, indicating that students' self-confidence is quite good. Interest and Enjoyment (IE) is slightly higher, at 71%, which means that most students are interested and enjoy science lessons. However, in the Connection to Daily Life (CDL) indicator, the value is lower at 66%, indicating a lack of connection between science lessons and students' daily lives. Cross-Cultural Interactions (CCI) received the highest percentage, 78%, indicating that students felt science lessons helped them understand other cultures.

Level of Motivation to Learn Science at MIN 3 Lampung Utara Based on Four Indicators

Self-Efficacy Indicator

The level of motivation to learn science on the self-efficacy (SE) indicator is measured through 5 questions that cover various aspects of students' confidence in understanding and doing science tasks. The results of measuring the level of motivation are then classified into four categories, which can be seen in Figure 3 below

.Figure 3. Level of Self-Efficacy



The graph above shows the level of motivation to learn science based on the Self-Efficacy (SE) indicator on five questions (Q1, Q2, Q3, Q4, Q5) with four levels of self-belief: Very High, High, Low, and Very Low. Most students answered at the High level, indicating good confidence in learning science, although fewer students answered Very High. A decrease was seen at the Low and Very Low levels, where only a few students felt less confident. However, overall, in this indicator, the average motivation to learn science falls into the high category.

Interest and Enjoyment Indicator

The level of motivation to learn science on the Interest and Enjoyment indicator is measured through 5 questions covering various aspects of student interest and pleasure in learning science. The results of measuring the level of motivation are then classified into four categories, which can be seen in Figure 4 below.

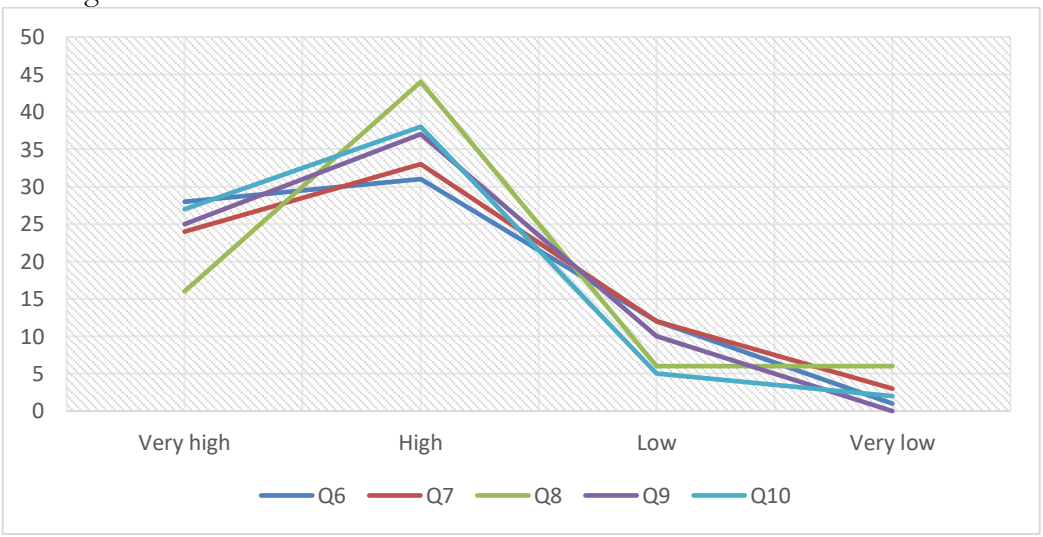


Figure 4. = Motivation Level of the Interest and Enjoyment

The graph above illustrates the motivation to learn science on the Interest and Enjoyment indicator based on five questions (Q6, Q7, Q8, Q9, Q10) grouped into four categories: Very High, High, Low, and Very Low. The results show that the majority of students are in the High category, indicating a fairly high interest and enjoyment of science learning. In the Very High category, there were a few very enthusiastic students, while in the Low and Very Low categories, the number of interested students decreased significantly. This indicates that most students quite enjoy the process of learning science, but only a small number are very enthusiastic. However, overall, the average motivation to learn science in this indicator is classified in the high category.

Connection to Daily Life Indicator

The level of student's motivation in learning science on the indicator of connection to daily life was evaluated through five questions covering various aspects of the relevance of natural science to their daily experiences. The results of this evaluation were then grouped into four categories, which can be seen in Figure 5 below.

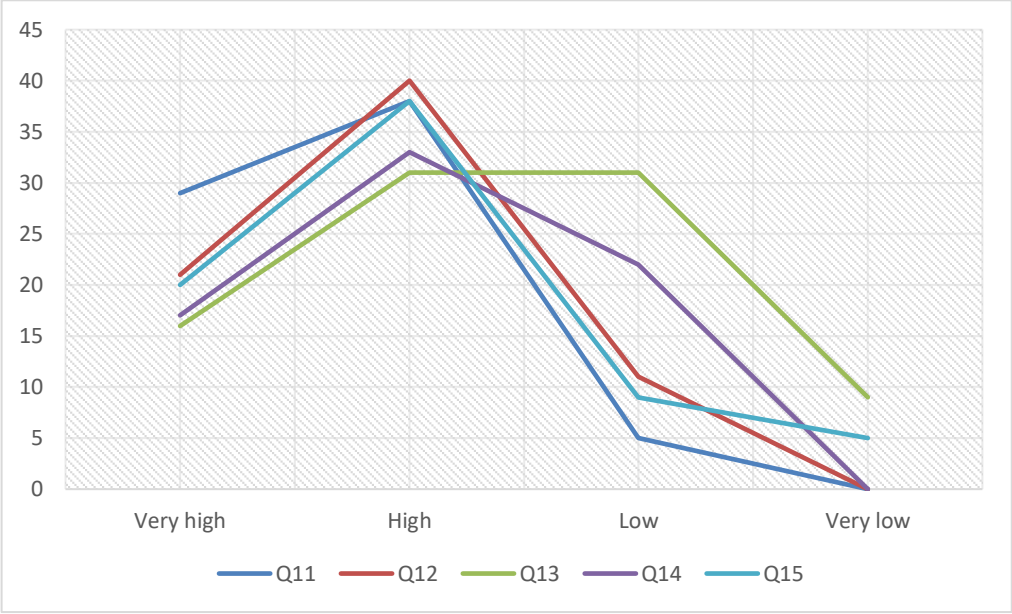


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Figure 5. Level of Connection to Daily Life

The graph above shows the motivation to learn science on the Connection to Daily Life indicator measured through five questions (Q11, Q12, Q13, Q14, Q15) and grouped into four categories: Very High, High, Low, and Very Low. The results show that the majority of students are in the High category, indicating that many students feel that science learning is relevant to their daily lives. In the Very High category, only a few students strongly felt this connection, while in the Low and Very Low categories, there was a sharp decline, indicating that some students felt less of a connection between science learning and their daily lives. Even so, the average IPA learning motivation for this indicator was generally in the high category.

Cross-Cultural Interactions Indicator

The level of motivation to learn science on the intercultural interaction indicator is measured through 5 questions that cover various aspects of student interaction with other cultures in the context of science learning. The results of this measurement are then classified into four categories, as shown in Figure 6 below

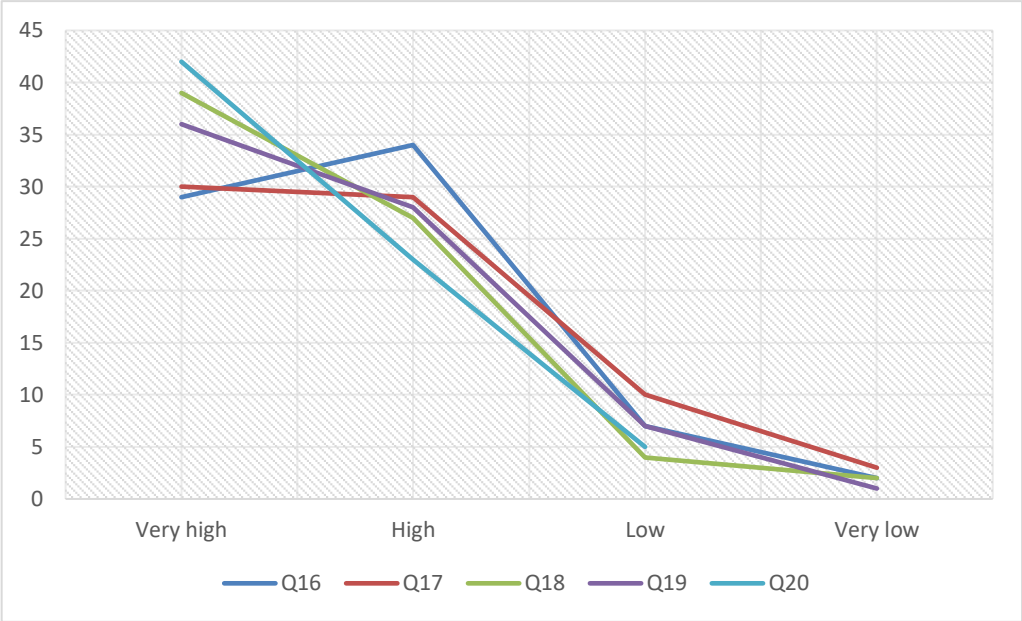

Figure 6. Level of the Cross-Cultural Interactions

The graph above illustrates science learning motivation on the Cross-Cultural Interaction indicator measured through five questions (Q16, Q17, Q18, Q19, Q20) and grouped into four categories: Very High, High, Low, and Very Low. From the graph, the majority of students showed a fairly high level of motivation in the High category, with most responses falling between the High and Very High categories. A decrease is seen in the Low and Very Low categories, where only a few students have low motivation related to intercultural interaction in science learning. This shows that most students feel the benefit or connection between science learning and intercultural interactions, although there are a small number of students who feel the lack of connection.

DISCUSSION

The results of this study indicate that students' science learning motivation at MIN 3 Lampung Utara is at a good level, with an average percentage reaching 71.67%. In detail, the Cross-Cultural Interactions (CCI) indicator shows the highest result with an average percentage of 78.24%, followed by the Interest and Enjoyment (IE) indicator of 71.30%. Meanwhile, the Self-Efficacy (SE) and Connection to Daily Life (CDL) indicators recorded lower scores, each with an average percentage of 70.37%. This finding indicates that students at MIN 3 Lampung Utara have high motivation in terms of cross-cultural interaction and interest in science learning. However, they still face challenges in connecting the material learned to their daily lives.

The analysis of the level of motivation to learn science at MIN 3 Lampung Utara using the Rasch Model is presented in the form of Table 1 above. Table 1 shows positive results based on the data obtained. With a person reliability of 0.78, the assessment of students' learning motivation is quite good, indicating that the measurement results are consistent among individuals. In addition, item reliability reached 0.85, indicating that the items used to measure science learning motivation have high consistency. This indicates that the instrument used is effective in capturing various aspects of students' motivation. Overall, these data reflect that science learning motivation at MIN 3 Lampung Utara is at a good level, with a strong measurement basis.

This finding has similarities with Ginzburg and Barak's (2023) research, which also showed that Cross-Cultural Interactions (CCI) indicators can be one of the main factors influencing science

learning motivation. The study found that learning that involves cross-cultural aspects can increase students' interest and engagement in learning. Therefore, this finding further strengthens the importance of integrating cultural context in science teaching to increase student motivation.

However, on the Connection to Daily Life (CDL) indicator, the findings of this study are slightly different from the results of previous studies, such as the one conducted by Aminatun (2019), which showed that students in other elementary schools tend to be more able to connect science lessons with their daily lives. The low score on the CDL indicator in this study could be due to the lack of application of local context in the science materials taught at MIN 3 Lampung Utara. This shows that although students' motivation in other aspects is quite high, there are still challenges in linking science learning with real experiences and situations faced by students on a daily basis.

This research makes an important contribution in understanding the pattern of students' science learning motivation at MIN 3 Lampung Utara. The findings obtained show that the Cross-Cultural Interactions (CCI) indicator is one of the dominant factors in building students' motivation to learn science, which was also found in Ginzburg and Barak's research (2023). This research also provides new insights that the Connection to Daily Life (CDL) indicator needs more attention in the learning process in elementary schools. This is in line with previous research that suggests the importance of learning that connects science concepts with students' local experiences and contexts.

To increase motivation to learn science, especially on the Connection to Daily Life (CDL) indicator, it is recommended that teachers implement learning methods that are more contextual and based on students' real experiences. One approach that can be implemented is Project-Based Learning (PjBL), which allows students to work on projects that are relevant to their daily lives, such as local environmental or cultural issues. This approach can strengthen the connection of science materials to students' experiences while increasing their overall motivation to learn. In addition, developing a curriculum that is more adaptive to the local context can also help improve the relevance of science learning at MIN 3 Lampung Utara.

Overall, this study provides a strong foundation for the development of more effective and contextualized science learning. By considering the results obtained, teachers and curriculum developers can design learning strategies that are more in line with the needs of students at MIN 3 Lampung Utara, increasing students' motivation and engagement in learning science.

CONCLUSION

Based on the results of this study, it can be concluded that the motivation to learn science of students at MIN 3 Lampung Utara is classified as good, with an average percentage of motivation reaching 71.67% and falling into the high category. The analysis shows that the Cross-Cultural Interactions (CCI) indicator is the highest aspect, reaching 78.24%, followed by the Interest and Enjoyment (IE) indicator with a percentage of 71.30%. This shows that students feel involved and happy in learning science and are able to relate learning to cross-cultural interactions. However, students face challenges in linking science material with everyday life, which is reflected in the Connection to Daily Life (CDL) indicator, which has the lowest percentage. In addition, the Self-Efficacy (SE) indicator is in the medium category, with an average percentage of 70.37%. These results indicate the need for a more effective approach to integrating science materials into the context of students' real lives so that their overall learning motivation can increase.

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