JPPIPA (Jurnal Penelitian Pendidikan IPA)

Vol.10 No. 2 2025

http://journal.unesa.ac.id/index.php/jppipa

ANALYSIS OF SCIENCE LEARNING MOTIVATION OF CLASS VIII STUDENTS

Santa Silveria Br Sembiring[1], Nia Erlina[2], Kompyang Selamet[3]
[1,2,3] Department of Physics and Science Teaching, Faculty of Mathematics and Natural Sciences, Universitas Pendidikan Ganesha, Indonesia

Abstract

This study analyzes the motivation to learn science and the supporting and inhibiting factors among grade VIII students at SMP Negeri 6 Sikur. This qualitative research employed a descriptive approach with purposive sampling, involving 33 students and one science teacher. The focus was on learning motivation and related factors. Data were collected through observation, questionnaires, interviews, and documentation, and analyzed using Miles and Huberman's model, which includes data reduction, presentation, and conclusion drawing. Data validity was ensured through technical triangulation, source triangulation, and member checking. Findings show that students' motivation to learn science was generally low, with an average score of 49.35%. Factors influencing motivation included internal aspects such as aspirations, learning abilities, student conditions, and dynamic elements in learning, as well as external aspects like environmental conditions and teacher efforts in teaching.

Keywords: Motivation, Motivational Factors, Learning Science

Article History: Received: August 02nd, 2025. Revised: December 16th, 2025. Published: December 31st, 2025

[1]**Corresponding Address:**
Department of Physics and Science Teaching, Faculty of Mathematics and Natural Sciences, Universitas Pendidikan Ganesha.
E-mail: santa.silveria@undiksha.ac.id

p-ISSN: 2527-7537
e-ISSN: 2549-2209

INTRODUCTION

Education plays a strategic role in shaping character, developing thinking skills, and preparing students to face global challenges brought about by advances in science and technology. Educational success is measured not only by academic achievement but also by the quality of the learning process, with motivation to learn being a key determinant (Inah, 2015). In the context of Natural Science (IPA) learning, motivation plays a crucial role in encouraging students to actively observe, experiment, and think critically about natural phenomena (Sujana, 2014; Pratiwi et al., 2022). This aligns with global demands to produce a generation with 21st-century skills such as critical, creative, collaborative, and communicative thinking, as well as national demands, as mandated by Minister of Education and Culture Regulation No. 103 of 2014, that learning must be interactive, enjoyable, challenging, inspiring, and motivate students to actively participate.

However, various studies indicate that motivation to learn science among junior high school students in Indonesia remains a challenge. Research by Asih et al. (2024), Aras et al. (2023), and Rini & Arsani (2022) found low student engagement in science learning, reflected in minimal participation in discussions, low courage to express opinions, and a lack of initiative in completing assignments. A similar situation was identified at SMP Negeri 6 Sikur, where eighth-grade students demonstrated low enthusiasm for science learning, were lazy about completing assignments, and tended to engage in activities outside of class. This resulted in low conceptual understanding and poor science learning outcomes.

Previous studies have analyzed science learning motivation in various regions, such as Wahyuni et al. (2022) at SMP Kristen Tunas Harapan Pare, Ula (2023) at MTs Umar Zahid Semelo, and Pardede et al. (2022) at SMP Methodist-9 Medan. While these studies provide a foundation, the key gap addressed by this research is the complex interplay of internal and external factors specifically within the unique context of SMP Negeri 6 Sikur, which exhibits notably low science learning motivation (49.35%)—a specific profile analysis and factor mapping that has not been undertaken before in this school. This study offers a comprehensive, case-specific qualitative analysis that is essential for designing targeted, context-driven interventions, thus addressing the limitations of more general, non-contextual motivation studies.

Based on this gap, this study aims to analyze the level of science learning motivation of eighth-grade students at SMP Negeri 6 Sikur and identify inhibiting and supporting factors. The results are expected to serve as a basis for teachers and schools in designing learning strategies that can enhance students' science learning motivation and enrich the literature on science learning motivation in the context of junior high schools in Indonesia.

METHOD

Research design

This study employed a qualitative approach with a descriptive approach. The choice of qualitative descriptive research is justified because it aims to provide an in-depth, holistic, and contextual understanding of the phenomenon of low science learning motivation and the complex factors influencing it, which cannot be captured adequately by quantitative measures alone. This approach was chosen to provide an in-depth description of students' science learning motivation and the factors influencing it, based on data obtained in the field without any variable manipulation. The research design adheres to the concept of naturalistic qualitative research according to Moleong (2013), which studies phenomena in natural settings with the researcher as the primary instrument. The study focused on analyzing the science learning motivation profile and identifying supporting and inhibiting factors.

Research Objectives

The research was conducted at SMP Negeri 6 Sikur, located on Jalan Perempungan, Lingkung Deye, Tetebatu Village, Sikur District, East Lombok Regency, West Nusa Tenggara Province. The study took place during the even semester of the 2024/2025 academic year.

The subjects were 33 eighth-grade students selected using a purposive sampling technique, considering the suitability of the respondents' characteristics to the research objectives, along with one eighth-grade science teacher. The research objectives included students' levels of science learning motivation and the internal and external factors influencing them.

Data collection technique

Data collection in this study was conducted through observation, questionnaires, interviews, and documentation. Observations were conducted non-participatory in classes VIII A and VIII B to observe students' learning behavior during science learning. The observation activities used observation sheets compiled based on learning motivation indicators according to Sardiman (2011), which include learning perseverance, tenacity in facing difficulties, interest in problems, independence, boredom with routine tasks, the ability to defend opinions, confidence in one's own work results, and enjoyment of solving problems. Next, a closed questionnaire with a Likert scale was given to all class VIII students to measure the level of science learning motivation. The questionnaire consisted of 30 positive and negative statements representing learning motivation indicators, where respondents were asked to mark a checklist according to the conditions they experienced. In addition, semi-structured interviews were conducted with the class VIII science teacher and several students selected based on the learning motivation categories (high, medium, low) obtained from the questionnaire results. These interviews aimed to explore in depth the internal and external factors that influence science learning motivation. Data collection

was also supplemented with documentation in the form of photographs of learning activities, class schedules, attendance lists, and relevant school documents.

The data collected were analyzed using the Miles & Huberman (1994) analysis model, which consists of three stages: data reduction, data presentation, and conclusion drawing/verification. The data reduction stage involved selecting, simplifying, and focusing data relevant to the research objectives. Data presentation was carried out in the form of narrative descriptions, tables, and graphs to facilitate conclusion drawing. Next, conclusions were drawn in stages and continuously verified until valid final results were obtained. Data validity was ensured through source triangulation, which involves comparing information from teachers, students, and observations; technical triangulation, which involves comparing data obtained from observations, questionnaires, interviews, and documentation; and member checking with respondents to ensure the researcher's interpretations align with the facts on the ground.

RESULTS AND DISCUSSION

The results of the science learning motivation questionnaire analysis of 33 eighth-grade students at SMP Negeri 6 Sikur showed that the average percentage of learning motivation was in the low category, namely 49.35%. The distribution of learning motivation categories according to Figure 1 shows that most students have low motivation (60.61%), while medium motivation is possessed by 24.24% of students, and high motivation is only 15.15%.

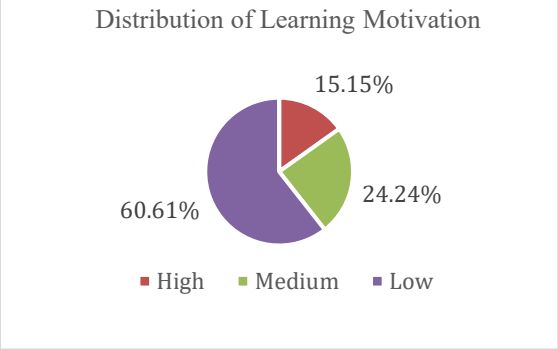

Figure 1. Distribution of learning motivation

These findings demonstrate a fundamental problem in students' motivation to learn that requires attention. Based on the indicators, the percentage calculation results for each learning motivation indicator can be seen in Table 1.

Table 1. Results of percentage calculation for each indicator

Number	Indicator	Percentage	Category
1	Diligent in learning	51.21%	Low
2	Persistent in the face of difficulties	51.67%	Low
3	Shows interest in various problems	56.36%	Medium
4	Prefers to work independently	48.79%	Low
5	Easily bored with routine tasks or repetitive tasks	47.88%	Low
6	Able to defend one's opinions	44.39%	Low
7	Does not easily let go of one's beliefs	52.48%	Low
8	Likes to find and solve problems in questions	42.02%	Low
	Average % Overall	49.35%	Low

Based on Table 1 above, it can be seen that the indicator with the highest percentage is showing interest in various problems (56.36%), which is in the sufficient category. While the lowest indicator is liking to find and solve problems in questions (42.02%), which is in the low category. This difference illustrates that students tend to show interest when the material is related to everyday life or when there is an empathetic aspect towards peers, but are not yet ready or motivated to face more complex challenges such as in-depth problem-solving.

Comparatively, this finding aligns with previous research showing a relationship between low learning motivation and low activeness in science learning (Alfiah, 2020; Lutfiani, 2022). Students with low motivation tend to be passive, less courageous in expressing opinions, and avoid challenges, which weakens the process of internalizing science concepts.

Based on interview results, internal factors influencing the motivation to learn science among eighth-grade students at SMP Negeri 6 Sikur encompass four main aspects. First, in terms of goals or aspirations, significant differences were found among students in determining learning goals. Some students had clear goals, such as achieving high science grades or improving their academic abilities, resulting in more consistent and diligent learning behavior. This aligns with Suralaga's (2021) opinion that aspirations or goals are one of the main drivers influencing the direction and strength of learning motivation. Conversely, some students came to school solely to fulfill attendance obligations, without having clear learning goals, resulting in low motivation despite verbally expressing a desire for good grades.

Second, regarding learning ability, interviews revealed that students with a good understanding of the material tended to be more active and participate in learning, while students who struggled to grasp the material, particularly abstract concepts in science, showed decreased interest. This aligns with Uno (2016), who stated that adequate learning ability can strengthen motivation, while unaddressed academic difficulties will weaken the drive to learn.

Third, physical and psychological factors also influence student motivation. Students experiencing health problems such as illness, lack of sleep, or hunger tend to be less focused on learning, and some even fall asleep in class. Psychological factors such as mental burden, stress, or fatigue from extracurricular activities also affect learning enthusiasm, especially during the final hours. This is reinforced by Prayitno's (1989) opinion that suboptimal physical and psychological conditions can significantly hinder the learning process.

Fourth, regarding the dynamic elements of learning, it was found that some students have fluctuating motivation their enthusiasm can increase when the material being taught is interesting or relevant, but quickly decline when faced with difficulties or when their mood is unfavorable. In accordance with Sardiman's (2011) view, these dynamic elements significantly determine the stability of learning motivation, and instability can hinder the achievement of learning goals.

Meanwhile, external factors influencing science learning motivation include environmental conditions and teacher efforts in teaching. The family environment plays a crucial role as a source of moral and material support. Some students receive encouragement and guidance from their parents, although this is limited to non-academic aspects due to their limited understanding of science material. Conversely, some students receive no guidance or appreciation from their families for their learning achievements. This finding aligns with Uno (2016), who emphasized that family support is a crucial component in maintaining learning motivation. The friendship environment also plays a role; some students help each other through notes or discussions, while others are reluctant to ask for or provide assistance. In terms of school facilities, limited facilities are a real obstacle, such as the limited number of science textbooks per class, damaged books, and rarely used science laboratories due to equipment failure. This situation supports the findings of Wahyuni et al. (2022), who stated that limited learning facilities can hinder student motivation.

Regarding teachers' teaching efforts, interviews revealed that teachers attempted to motivate students through various means, such as asking questions, using a personal approach, and facilitating discussions. However, students' perceptions of their teaching styles varied. Some students viewed the teacher's assertiveness as a positive factor, encouraging them to study with greater discipline, while others felt the classroom atmosphere was too quiet and boring, and some even felt afraid because they perceived the teacher as being stern. This aligns with Suralaga's (2021) opinion that a teacher's teaching style must accommodate the differences in student characteristics to effectively motivate them. These differing perceptions indicate that teacher motivation strategies need to be tailored to student characteristics and needs to create a

conducive learning environment and encourage active student engagement.

Thus, the low motivation to learn science at SMP Negeri 6 Sikur is the result of a complex interaction between internal weaknesses, such as low aspirations, limited learning abilities, and unstable motivation, and external barriers such as limited facilities, varying environmental support, and differing perceptions of teacher efforts. Comprehensive improvement efforts need to involve improving the quality of learning, strengthening family support, improving facilities and infrastructure, and adopting more adaptive and interactive teaching strategies.

CONCLUSIONS AND SUGGESTIONS

Conclusion

Based on the results of the research and discussion, it can be concluded that (1) the motivation to learn science of class VIII students at SMP Negeri 6 Sikur is included in the low category. This is reflected in the results of the questionnaire calculation which shows that 60.61% of students have learning motivation that is included in the low category, 24.24% of students have learning motivation that is categorized as sufficient, and only 15.15% of students have learning motivation that is categorized as high. The average learning motivation of class VIII students in learning science at SMP Negeri 6 Sikur on eight indicators is categorized as low with an average overall percentage of 49.35%. The indicator showing interest in various problems has the highest percentage of 56.36%. Then the indicator does not easily let go of something that is believed with a percentage of 52.48%. The third order is the indicator of persistence in facing difficulties with a percentage of 51.67%. The fourth order is the indicator of perseverance in learning with a percentage of 51.21%. The fifth order is the indicator of preferring to work independently with a percentage of 48.79%. The sixth order is the indicator of getting bored quickly with routine tasks or the same things with a percentage of 47.88%. The seventh order is the indicator of being able to defend one's opinion with a percentage of 44.39%. Then the indicator with the lowest percentage is liking to find and solve problems in questions with a percentage of 42.02%. (2) The factors that inhibit and support the motivation to learn science for class VIII students at SMP Negeri 6 Sikur from internal factors (ideals or aspirations, learning abilities, student conditions, and dynamic elements in learning) and external (environmental conditions and teacher efforts in teaching students) have contributed enough to students' motivation to learn science.

Suggestion

The suggestions that can be conveyed are as follows. (1) The results of this study are expected to be a reference for teachers to always strive to increase student learning motivation. (2) The results of this study are expected to be a reference for schools in terms of increasing motivation and providing learning facilities for teachers and students so that the learning process can be carried out with quality and fun. (3) This study is expected to be a reference for researchers in the field of education.

REFERENCES

Alfiah, S. (2020). Analisis Penyebab Rendahnya Motivasi Belajar dalam Pembelajaran IPS pada Peserta Didik Kelas V SD Negeri Tegalrejo No. 98 Surakarta Tahun Ajaran 2020/2021.

Aras, A., dan Dewi, N. R. 2023. Upaya Peningkatan Minat Belajar IPA Peserta Didik Menggunakan Model Pembelajaran Children Learning In Science (CLIS) Kelas VIII SMPN 41 Semarang. *In Proceeding Seminar Nasional IPA*.

Asih, C., Prabowo, C. A., dan Ekowati, E. 2024. Penerapan Model Project Based Learning (PJBL) Untuk Meningkatkan Keaktifan Peserta Didik Dalam Pembelajaran IPA Fase D. *Didaktis: Jurnal Pendidikan dan Ilmu Pengetahuan*, *24*(3).

Inah, E.N. 2015. Peran komunikasi dalam interaksi guru dan siswa. Al-TA'DIB: Jurnal Kajian Ilmu Kependidikan, 8(2), 150-167.

Lutfiani, N. (2022). Hubungan Motivasi Belajar Dengan Aktivitas Belajar Siswa Pada Mata Pelajaran Ekonomi Kelas XI di SMA Negeri 1 Sukasada (Doctoral dissertation, Universitas Pendidikan Ganesha).

Miles, M. B. dan Huberman, A. M. (1984). *Qualtative Data Analysis: A Sourcebook of New Methods.* California: SAGE Publications Inc.

Moleong dan Lexy J. 2013. *Metodologi penelitian kualitatif. Edisi Revisi.* Bandung: PT.Remaja Rosdakarya.

Pardede, H., dkk. 2022. Analisis Motivasi Belajar Siswa Pada Pelajaran IPA SMP Methodist-9 Medan di Era Normal. *Equilibrium: Jurnal Pendidikan*, *10*(3), 436-444.

Pratiwi, E. B., dkk. 2022. Peningkatan Keaktifan Sikap Dan Hasil Belajar IPA Melalui

Model PBL Pada Siswa Kelas IV SD Negeri Patimuan 01. *Jurnal Pendidikan dan Konseling (JPDK)*, *4*(4), 1359-1365.

Prayitno, E. 1989. *Motivasi dalam Belajar dan Berprestasi.* Jakarta: Departemen Pendidikan dan Kebudayaan Direktorat Jendral Pendidikan Tinggi.

Rini, J., dan Arsani, R. 2022. Penerapan Model Problem Based Learning Untuk Meningkatkan Keaktifan Belajar Peserta Didik Mata Pelajaran IPA Kelas VIII SMP Negeri 3 Wonogiri.

Sardiman, A.M. 2011. *Interaksi dan Motivasi Belajar Mengajar*. Bintan: Rajawali Pers.

Sujana, A. 2014. *Dasar-Dasar IPA: Konsep dan Aplikasinya*. Bandung: UPI PRESS.

Suralaga, F. 2021. *Psikologi pendidikan implikasi dalam pembelajaran.* Depok: Rajawali Pers.

Ula, N. N. M. 2023. Analisis Motivasi Belajar Siswa SMP/Mts Terhadap Mata Pelajaran IPA. *Proceedings of Life and Applied Sciences*, *1*.

Uno, H. B. 2016. *Teori Motivasi dan Pengukurannya*. Jakarta: Bumi Aksara.

Wahyuni, S. A. S., dkk. 2022. Analisis Motivasi Siswa dalam Pembelajaran IPA di SMP Kristen Tunas Harapan Pare. In *Prosiding Seminar Nasional Kesehatan, Sains dan Pembelajaran*, 2(1), 251-254.