

# PARADIGMA

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## ANALYSIS THE EFFECT OF LEARNING DIFFICULTIES ON CHEMISTRY STUDENTS LEARNING ACHIEVEMENT AT CLASS XI IN MAN 4 MALUKU TENGAH

RISNAWATI

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### ABSTRAK

Penelitian ini bertujuan untuk mengetahui faktor-faktor penyebab kesulitan belajar yang berdampak terhadap prestasi belajar siswa pada mata pelajaran kimia. Subjek dalam penelitian ini adalah siswa kelas XI IPA Madrasah Aliyah Negeri 4 Maluku Tengah yang terletak di Desa Rajawali, Kecamatan Banda, Kabupaten Maluku Tengah, Provinsi Maluku yang berjumlah 27 orang. Jenis penelitian ini termasuk dalam penelitian deskriptif dengan pendekatan kualitatif. Dari hasil UAS tahun ajaran 2022/2023, nilai rata-rata siswa kelas XI IPA MAN 4 Maluku Tengah pada mata pelajaran kimia adalah 64,6 dengan nilai tertinggi 80 dan nilai terendah 40. Rekapitulasi hasil tes menunjukkan bahwa sekitar 70,4% prestasi belajar siswa tergolong rendah. Untuk mengumpulkan informasi tentang kesulitan belajar yang dialami siswa, peneliti menggunakan teknik komunikasi tidak langsung dengan menggunakan alat pengumpul data berupa angket penelitian sebanyak 30 soal. Berdasarkan hasil angket dari 27 responden kelas XI IPA MAN 4 Maluku Tengah menunjukkan bahwa terdapat beberapa tingkat kesulitan belajar yang dialami siswa. Berdasarkan indikator yang ada diperoleh 4 siswa dengan presentase 15% yang berarti memiliki tingkat kesukaran dengan standar sedang. 7 siswa dengan presentase 26% yang berarti memiliki tingkat kesukaran dengan standar cukup. 14 siswa dengan presentase 52% dan menunjukkan tingkat kesukaran dengan standar kurang. 2 siswa dengan presentase 7% yang menunjukkan tingkat kesukaran dengan standar sangat rendah. Perbedaan kemampuan belajar siswa inilah yang menjadi penyebab rendahnya capaian hasil belajar siswa kelas XI IPA MAN 4 Maluku Tengah. Jika dilihat secara keseluruhan dapat diketahui bahwa kesulitan belajar yang dialami siswa dalam kegiatan belajar mengajar sangat mempengaruhi capaian hasil belajarnya.

**Kata Kunci:** *Kesulitan Belajar; Prestasi Belajar; Pelajaran Kimia*

### ABSTRACT

This study aims to determine the factors behind learning difficulties that have an impact on student achievement in chemistry subjects. The subjects in this study were students of class XI IPA Madrasah Aliyah Negeri 4 Central Maluku located in Rajawali village, Banda District, Central Maluku Regency, Maluku Province were totaling 27 people. This type of research is included in descriptive research with a qualitative approach. From the UAS results for the 2022/2023 academic year, the average grade of student at class XI IPA MAN 4 Central Maluku in chemistry subjects was 64.6 with the highest score is 80 and the lowest score is 40. The recap of the test results shows that about

70.4% of students achievement is low. To collect information about learning difficulties experienced by students, researchers used indirect communication techniques using data collection tools in the form of research questionnaires with 30 questions. Based on the results of a questionnaire from 27 respondents in class XI IPA MAN 4 Central Maluku, it shows that there are some different levels of difficulty in learning difficulties experienced by students. Based on the existing indicators obtained 4 students with a percentage of 15%, indicating that the level of difficulty with a medium standard. 7 students with a percentage of 26% which means they have a level of difficulty with a sufficient standard. 14 students with a percentage of 52% and shows the level of difficulty with a standard that is less. 2 students with a percentage of 7%, showing the level of difficulty with a very low standard. The difference of student's abilities of learning is the cause how low achievement of student learning outcomes in class XI IPA MAN 4 Central Maluku. Taken as a whole, it can be seen that the learning difficulties experienced by students in teaching and learning activities greatly affect the achievement of their learning outcomes.

**Kata Kunci:** *Learning Difficulties; Learning Achievement; Chemistry Subject*

## INTRODUCTION

In general, a great learning process will also have an excellent impact on students. The process of teaching and learning activities in the classroom depends on a teacher who is able to transfer the knowledge, which can be understood by students. Because basically, the purpose of a learning process is someone who learns to be able to know and understand the intent of the data, information, and knowledge that they get from trusted sources (Al Hakim et al., 2018).

Teaching and learning activities that occur in the classroom is basically a process of transferring knowledge from an educator to students. In the teaching and learning process, every student must have some obstacles or learning difficulties. Learning difficulty is a condition where students are unable to know and understand what they are learning. Low learning outcomes indicate that there are some learning difficulties experienced by students (Sudiana et al., 2019).

The obvious impact of the existence of learning difficulties experienced by students is a declining in academic achievement which is marked by a descent in student learning outcomes (Ahmadi, 2005). This usually happens because students have learning difficulties in order that they are unable to know and understand the material in the subjects that they study in classroom. Many factors can be the cause of learning difficulties in students so it has an impact on the decline in their learning achievement

(Sani et al., 2021). One of them is because students do not like the lessons that they learn in class because they think these subjects are delicate.

Chemistry is one of the sciences belonging to the IPA, namely the science that studies the composition, structure, and properties of substances or materials from the atomic to molecular scale and their changes or transformations and their interactions to form materials that are found everyday (Yamtinah & Budiyo, 2015). Research in several countries shows that science, especially chemistry and physics, is one of the most disliked subjects for students (Ristiyani & Bahriah, 2016). Chemistry is often considered as a complicated subject, even students do not want to study it further, because many students have difficulty understanding chemical concepts (Chandrasegaran et al., 2007).

Based on research conducted by I Wayan Muderawan *et al* (2019), it is said that there are still many students who find it thorny to understand chemical material, causing their achievement of scores to be low (Muderawan et al., 2019). On the other hand, according to Subagia (2014) chemistry is one of the subjects that most high school students are not interested in, because chemistry is considered a knotty subject, which sometimes makes students unwilling to study further. The view of students who think that chemistry lessons are tricky causes students' motivation to study chemistry to be non-existent. So that a student who is not well motivated during learning will tend to be passive compared to students who are well motivated in learning (Budiariawan, 2019)

According to Yakina *et al.*, (2017), this difficulty in learning chemistry can be interpreted as a condition in the learning process which is characterized by the presence of certain obstacles to achieve maximum learning outcomes (Yakina et al., 2017). These conditions can result in student failure in the chemistry subject itself, thereby it will have an impact on the achievement of their learning outcomes at school. Fahmi (2017) explains that there are two factors that cause difficulties in learning chemistry that are felt by students, including internal and external factors. Internal factors include interest and motivation to learn students, health conditions, psychological students, while external factors include the material or chapters taught and the methods used by the teacher at the time of delivery of the subject matter and student learning methods (Fahmi & Astuti, 2017).

Students learning achievement is still low, especially in Chemistry subjects, indicating that there are weaknesses as well as difficulties in Chemistry subjects that are felt by students. Therefore, researchers are interested in conducting a study on the Analysis of the Effect of Learning Difficulties on Students' Chemistry Learning Achievement.

The impact is clearly visible from the existence of learning difficulties experienced by students, for example a decrease in academic achievement. This can happen because in the teaching and learning process a teacher sometimes only pays attention to the stages of delivering material, without seeing the difference in the time required by each student in understanding the material. As a result, students who have the ability to catch material quickly will feel bored, while students whose ability to catch material is slow will be confused because they have not fully understood the material presented by the teacher (Kusumaningrum, 2015).

## **METHOD**

The method used in this research is descriptive qualitative research method. According to Bogdan and Guba, Qualitative research or naturalistic inquiry is a research procedure that produces descriptive data in the form of written or spoken words and observable behavior (Suharsaputra, 2018).

The results of this study are described through the data obtained on the achievement of the final semester exam results for class XI science students at Madrasah Aliyah Negeri 4 Central Maluku in the middle of the 2022/2023 school year.

The instrument used to collect information about students' learning difficulties in chemistry in this study, used a questionnaire that has been validated judgment, namely 1 chemistry teacher who is considered competent in the field of chemistry and 2 chemistry lecturers. This questionnaire was prepared using 30 written statements.

The data obtained through the distribution of the questionnaire in this study were processed into tabular form and then given a score to get the results of the acquisition of filling out the questionnaire that had been filled out by students.

## **RESULT AND DISCUSSION**

The analysis of student learning difficulties is seen from their ability to answer chemistry questions in the final school exam in semester 1 of the 2022/2023 academic year. Based on the data obtained from the semester exam results, it can be seen the percentage of errors made by students in solving chemistry questions at the end of semester exams.

Based on the ensue of the analysis of learning difficulties found in class XI science students at Madrasah Aliyah Negeri 4 Central Maluku, it can be formulated as follows. Overall, the data from the analysis of learning difficulties for class XI IPA Madrasah Aliyah Negeri 4 Central Maluku can be seen in the table below.

**Table 1. The results of the students' scores**

No	Category	Score Result
1	The Amount of students	27 Students
2	Highest Score	85
3	Lowest Score	40
Rata-rata		55,4

Be grounded in the results of data gaining in table 1, it can be seen that the average score obtained by class XI IPA Madrasah Aliyah Negeri 4 Central Maluku students is 64.6. The highest score obtained by students is 85 and the lowest score is 40.

Be founded on the results of the analysis conducted by the researchers, it showed that about 70,4% or about 19 students had not yet been able to solve the questions given by the teacher when the school exam was held. This can be seen from the achievement of the average score obtained by students is 64.6.

The outcome of the final school exam in chemistry for 27 students of class XI science at the MA school. Negeri 4 Malteng shows that only 8 students or 29,6% have passed, based on the achievement of the scores they have obtained and adjusted to the minimum completeness criteria (KKM) of 70.

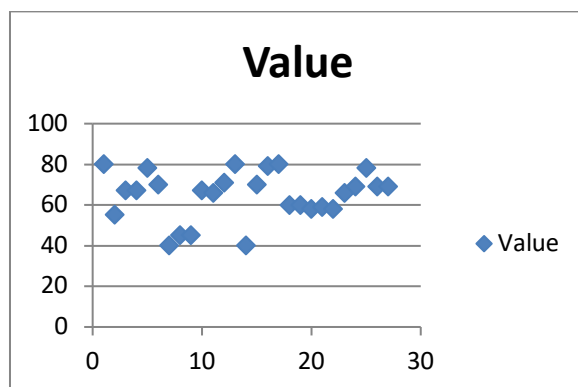
Analysis of learning difficulties experienced by students seen from learning achievement in the achievement of final semester exam scores was carried out using research questionnaires. The research questionnaire contains 30 questions which were

developed to look at the factors that cause learning difficulties felt by students, resulting in a decline in their learning achievement in chemistry subjects.

The results of student exams can give an indication that in general most of the students of class XI IPA MAN 4 Malteng have difficulties in studying chemistry subjects. According to Rumini et al (Irham & Wiyani, 2013) argued that learning difficulties are conditions when students experience certain obstacles to participate in the learning process and achieve optimal learning outcomes.

Meanwhile, according to Hamalik (1983), learning difficulties are things or disturbances that result in failure or at least become an obstacle thus it can hinder learning progress(Hamalik, 1975). The distribution of final semester test scores for chemistry subjects at MAN 4 Central Maluku school in the first semester of the 2021/2022 academic year can be seen in the following table;

**Table 2. Values of Semester Exam Results for Class XI MAN 4 Central Maluku.**



To analyze the factors that cause learning difficulties, the researchers used questionnaire data containing 30 questions which were validated by 3 teachers and lecturers who were considered competent in their respective fields. The factors that cause students' difficulties in learning in chemistry subjects were obtained by researchers through the findings from the analysis of the results of the questionnaire distributed to students. Then analyzed based on the results of the scoring on the answers obtained in the questionnaire data. The questionnaire is given a score on each predetermined scale, namely; 4 (yes), 3 (sometimes), 2 (no), and 1 (never).

Then the ensue of the percentage of data based on student answers are calculated based on the value scale chosen by students.

To interpret the data on learning difficulties into the category of Moderate, Enough, Bad, Very bad, the researcher looks for intervals with the following formula:

Interval :

$$\frac{\text{Measurement distance (R)}}{\text{Number of Intervals!}}$$

Description :

I : Interval Width

R : Measurement distance (highest value minus lowest value)

Based on the table above, it is known that:

Highest value = 137

Lowest value = 114

By entering these numbers into the formula, the width of the interval will be obtained as follows:

Interval :

$$\begin{aligned} &= \frac{\text{Measurement distance (R)}}{\text{Number of Intervals!}} \\ &= 137 - 114 / 4 \\ &= 5.75 \end{aligned}$$

Rounded to 6

So the width of the interval of learning difficulty data is 6, so to group the data above it can be classified as follows:

A. Very Good : 132 – 137

B. Good : 126 – 131

C. Enough : 120 – 125

D. Less : 114 – 119

Data on students' learning difficulties in class XI IPA MAN 4 Central Maluku can be seen in the table below:

**Table 3. The Percentage Of Learning Difficulties Experienced By Class XI IPA  
MAN 4 Maluku Tengah**

Interval	Total	Percentage	Description
132 – 137	4	15%	CURRENTLY

126 – 131	7	26%	ENOUGH
120 – 125	14	52%	NOT ENOUGH
114 – 119	2	7%	VERRY LESS
$\Sigma$	27	100%	-

Be rooted in the results of the recapitulation of the percentage of learning difficulties experienced by class XI IPA MAN 4 Central Maluku, it can be concluded that, in general, 27 respondents in class XI IPA MAN 4 Central Maluku have different levels of difficulty regarding the learning difficulties they experience. More clearly, it will be described as follows:

1. Respondents who scored in the interval 132 – 137 were 4 students with a percentage of 15%, indicating that the level of difficulty was of medium standard.
2. Respondents who scored in the interval 126 – 131 were 7 students with a percentage of 26%, which means they have a level of difficulty with a sufficient standard.
3. Respondents who scored in the interval 120 – 125 were 14 students with a percentage of 52% and showed a level of difficulty with less standards.
4. Respondents who scored in the interval 114 – 119 were 2 students with a percentage of 7%, indicating the level of difficulty with a very low standard.

Be connected with the data above, it can be seen that the overall average score of students in chemistry subjects is 66.4. This shows that from a total of 27 students of class XI IPA at MAN 4 Central Maluku, Maluku Province who were taken as objects in the study, it showed that most of the students had poor chemistry learning achievements.

Stand on the results of interviews conducted by researchers with teachers of chemistry subjects at MAN 4 Central Maluku, several information findings related to problems that often occur in the classroom when chemistry learning is taking place.

There are several things that often become problems in the learning process, for example related to students' abilities or responses. Some of the factors that cause these problems, for example, the psychological condition of students, the association between

friends, family background, a sense of laziness that comes from students due to lack of motivation to learn and others.

## CONCLUSION

Ground the results of data analysis and discussion of the research results, the following conclusions can be drawn; All over the achievement of the average grade XI IPA MAN 4 Central Maluku in the final semester exam in chemistry subjects was 64.6. The highest score obtained is 80 and the lowest score is 40. Based on the questionnaire data obtained by the researchers, it shows that there are several factors that cause learning difficulties experienced by students of class XI IPA MAN 4 Central Maluku so it affects the achievement of learning outcomes or student learning achievements in class and most students have a presentation of learning chemistry at a less standard. The derive of the study indicate that there are variations in the differences between the factors that cause learning difficulties experienced by students.

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