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Decoding The Obstacles of 10th Grade Student Learning in Atomic Structure at SMAN 1 Sungai Tarab

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Abstract
This research uses qualitative research methods (descriptive). The subjects of this research were 10th grade students of Phase E.8 with a total of 28 students. Based on the research that has been done, it can be concluded that the results of the analysis of the types of learning difficulties and the factors that cause chemistry learning difficulties in 10th Grade students of atomic structure material at State Senior High School (SMAN) 1 Sungai Tarab are as follows. First, the types of chemistry learning difficulties consist of 3 types of difficulties including difficulty understanding terms with the highest percentage of 67.86% on the term atomic symbol, difficulty understanding concepts with the highest percentage of 67.86% on the concept of atomic structure according to Thomson and difficulty understanding numbers with the highest percentage of 64.28% on calculations or numbers looking for the number of values of atomic constituent particles (ions). Second, the factors causing chemistry learning difficulties consist of 2 factors, namely internal factors which include physical factors with a percentage of 32.14%, psychological factors with a percentage of 82.14% and emotional factors with a percentage of 71.43%, and external factors which include family factors with a percentage of 25%, school factors with a percentage of 35.71% and community factors with a percentage of 28.57%.

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INTRODUCTION

Chemistry is a science that belongs to the science family. Chemistry is a process of discovery as well as a body of knowledge that includes facts, concepts, and principles. Chemistry is the scientific study of the structure of matter and the significant changes that result from natural processes and deliberate experimentation (Keenan and Wood, 1966). One of the high school courses that investigates natural phenomena and has applications to everyday life is chemistry. Since chemistry is the basic science for technological advancement, chemistry education is currently very important to society.

One of the chemistry materials is atomic structure. Atomic structure is a difficult concept, because it contains abstract concepts that are difficult for most students to understand. The concept of atomic structure is one of the chemical concepts that is quite abstract and difficult to understand by high school students. Many things can be done to increase students' interest in the study of chemistry in school, starting with building their perspective on the subject. For example, students can be taught that chemistry is important, fun, and beneficial for everyone. The occurrence of chemistry in everyday life can be connected to the study of chemistry in

school. Students receive instruction on how to critically and creatively approach each part of the chemicals they study. With that, students can see and understand that chemistry has an important role in everyday life, not just as material that must be remembered.

Students taking chemistry courses in SMA/MA are expected to develop a good attitude towards the topic by appreciating the order and beauty of nature and the majesty of God Almighty. Develop a collaborative, open-minded, honest, impartial, and critical attitude towards science. According to the content guidelines of Permendiknas No. 22 of 2006, chemistry subjects in SMA/MA are designed to help students develop the following skills:

a. By appreciating the order and beauty of nature and praising the greatness of God Almighty, one can develop a good attitude towards chemistry.
b. Develop a scientific attitude that is cooperative, cooperative, honest, objective, open, and tenacious.
c. Gain experience using the scientific method through experiments, where students test hypotheses through installation, taking, processing, and interpreting instruments, as well as oral and written communication of experimental results.
d. Increase public knowledge of how applied chemistry can help and harm people, society, and the environment, and the value of protecting and regulating the environment for the good of society.
e. Recognize how chemical ideas, theories, and laws relate to each other and how to use them to address problems in modern technology and everyday life.

One of the barriers to effective learning is learning challenges. The challenges students face are characterized by certain obstacles that prevent them from achieving their learning goals. The five components that make up internal factors are: mental, physical, intellectual, artistic, and motivational. Among these 5 factors, physical and interest are the most impactful factors. Three different parts of the home environment, educational environment, and social environment make up the external factors. The social environment is the one that has the most impact of these three factors (Amaliah, 2021).

At the high school level, chemistry is one of the most challenging and disliked subjects by students, therefore when teachers discuss chemistry learning, students usually show little interest and find it difficult to understand the material. The level of student learning challenge in chemistry is also determined by how effectively the teacher explains the subject matter. When teaching chemistry, teachers often use a boring lecture approach to communicate the material (Prayunisa, 2022). Poor learning outcomes obtained by students are one sign that they have learning challenges (Priliyanti, 2021). A decline in academic performance or learning achievement usually indicates student learning challenges. The rise of student misbehavior, such as shouting in class, harassing others, fighting, often skipping or leaving school, is also a sign of learning challenges.

Based on the description above, at SMAN 1 Sungai Tarab 10th Grade in chemistry learning, there are still many students who get low learning outcomes. Based on the results of observations and interviews conducted by the author with 10th Grade chemistry teachers on November 23, 2022 that, before starting chemistry learning, the teacher has prepared material in the form of PPT, books and LKPD as teaching materials using the Blanded Model (Discovery, Inquiry, Problem Based Learning, and Project Based Learning). In the Discovery and Inquiry Models, teachers use a Teacher Centered approach, while in the Problem Based learning and Project Based Learning Models, teachers use a Scientific approach, with discussion and question and answer methods. In addition, teachers also use media in learning. However, after seeing the results of student learning, only 22.5% of the average percentage of completeness of 10th Grade students out of 34 students and 77.5% were not complete. This can be seen in the table 1.

Table 1. Percentage of Completion of Learning Outcomes of Class X.E8 SMAN 2 Sungai Tarab Academic Year 2022/2023

No.	KD	Class	Number of Students Completed	% Completeness
1.	3.1	X.E8	7 out of 34 students	20,5%
2.	3.2	X.E8	8 out of 34 students	23,5%
3.	3.3	X.E8	8 out of 34 students	23,5%
Averange Completion				22,5%

In the learning process, it does not always run smoothly and smoothly. Sometimes there are obstacles faced by students so that student learning outcomes have not been achieved optimally. Students should receive tutoring, assistance, and solutions to their learning challenges to overcome student problem issues. A teacher must review learning outcomes from daily, midterm, semester, and final exams. The purpose of doing so is to identify the learning outcomes that have been achieved in order to advance learning outcomes. In addition, the analysis is done to determine how thorough the learning was. Evaluation analysis is followed by follow-up, which can include remedial and enrichment activities. This analysis of individual evaluation findings is presented. In addition, educators should examine how well students have mastered the grade level skills and identify contributing variables that may have prevented students from achieving the required level of learning completion.

In order for this to be done easily, the researcher must first analyze what are the types of learning difficulties and the factors that cause student learning difficulties and educators are easier to take the next steps. Based on the background above, the results of observations and interviews that have been conducted by researchers, the researchers are interested in researching "Analysis of Learning Difficulties and Factors Causing Student Learning Difficulties in Learning. This review uses related research findings to support further investigation. In a way, it is also a comparison of previous research, both in terms of the benefits and disadvantages that existed before, and can support the argument, so in this case the researcher took research related to the title raised including:

1. Research by Erika Ristiyani (2016), namely Analysis of Student Chemistry Learning Difficulties in Sman X South Tangerang City, revealed that the moderate category was represented by an average percentage value of 70.15%. The average of each indicator found to be a factor in students having difficulty learning chemistry includes physiological factors (physical / sensory organs) of 74.5% (high category), psychology of 69.78% (medium category), social factors of 68% (medium category), infrastructure of 58.75% (medium category), learning methods of 77% (high category), and teachers of 77.17% (high category).
2. Research conducted by Fena Prayunisa (2022), namely the lack of enthusiasm and dislike of students for chemistry subjects can be attributed to a number of problems, according to the analysis of the difficulties of 11th Grade students at SMAN 1 Masbagik in learning chemistry. These factors include: 1) Internal factors are factors that come from the students themselves. 2) Peers, learning strategies, and teachers are examples of external variables. Based on the results of the aforementioned questionnaire, which was given to every student in 11th Grade Science (IPA), both students and 84 students, it was determined that only 53% of students found learning chemistry in class fun, only 30% of students liked the lessons, and only 30% of students understood what they were learning. There are two alternatives, which entail that chemistry teaching is very challenging to understand and that it is necessary to study chemistry as part of the science curriculum.
3. Research conducted by Yakina (2017) on Analysis of Student Learning Difficulties in 10th Grade Chemistry Subjects at SMAN 1 Sungai Ambawang, whose data shows that the percentage of students who experience semester difficulties is 48.99%, concept challenges

are 41.32%, and calculation difficulties are 70.97%. According to the survey results, external factors derived from family factors with aspects of facilities / infrastructure and family conditions, school factors with aspects of teachers, learning facilities, and school buildings, as well as community factors with aspects of mass media and the environment, are quite influential and contribute 59.25% of internal factors in terms of aspects of interest and motivation that affect student learning difficulties.

4. Research by Irna, C (2012) on students of 11th Grade Science (IPA) SMAN 1 Pekalongan, showed that students have difficulty understanding ideas in chemical bonding materials, which include intermolecular forces, hybridization theory, and valence bonds. The research findings revealed that: (1) students had 28.7% difficulty in explaining valence bond; (2) students had 51.4% difficulty in understanding the concept of hybridization; and (3) students had 42.3% difficulty in distinguishing between intermolecular forces.
5. Research by Asril, R. (2010) namely "Analysis of Learning Difficulties in Chemical Bonding Material 11th Grade SMAN 4 Bandung" with the results of 48.4% according to related research, many high school students struggle with chemical bonding materials. Chemical bonding is one of the core concepts in chemistry that students must understand in order to proceed to grade XI chemical bonding material. Chemistry teachers in schools must address students' problems with chemical bonding materials to determine the root of the problems students are experiencing. To be able to carry out the task of diagnosing or solving student learning challenges, the teacher's function in this scenario as an educator and educational facilitator is very important. Providing remedial or corrective assessment of incomplete students is the answer, based on the problems and realities faced by the teacher. In order for the incomplete student to receive the predetermined KKM score, remedial instructions are provided. Teachers do not conduct a discovery process on students' learning problems, that is, they do not specifically identify each student's learning difficulties. Instead, they emphasize the end result in the form of student completion scores on the topic.

The equation of the five studies above is that they both examine learning difficulties and factors of learning difficulties in students, while the difference in research that researchers will do with previous research is that researchers will examine learning difficulties and factors of learning difficulties in chemistry on atomic structure material in class X. According to this related research, many high school students struggle to learn chemistry. According to this related research, many high school students struggle to learn chemistry. Chemistry teachers at school must deal with the problems of students who have difficulty learning chemistry to identify the root of their problems. To be able to carry out the task of diagnosing or resolving students' learning challenges, the teacher's function in this scenario as an educator and educational facilitator is very important.

METHOD

The research method used is qualitative (descriptive). With the research subject is the students of Phase X.E8 class with a total of 28 students of SMAN 1 Sungai Tarab in the 2023/2024 academic year.

In this research, the researcher acts as the main instrument (key). The data collection technique in this study is to use observation techniques, interview questionnaires and documentation. To test the validity of the data, researchers used triangulation techniques. Furthermore, researchers use data analysis techniques, namely the Miles and Huberman theory which includes data reduction. This research data reduction uses data reduction through a Likert scale on each questionnaire indicator, then presents (displays) data in the form of narrative and descriptive writing, and after that makes conclusions from the data.

RESULTS AND DISCUSSION

This study aims to determine the types of learning difficulties in learning chemistry atomic structure material in class X.E8 students at State Senior High School (SMAN) 1 Sungai Tarab, as well as to determine the factors that cause student learning difficulties in learning chemistry atomic structure material in class X.E8 students at SMAN 1 Sungai Tarab to the research subject, namely Phase X.E8 class students totaling 28 people with details of 17 male students and 11 female students. After collecting data with steps, namely data reduction through a Likert scale on each questionnaire indicator, then presenting (display) data in the form of narrative and descriptive writing, and after that making conclusions from the data (Miles & Huberman, 1992). The following is an explanation of the results of each questionnaire.

Types of Chemistry Learning Difficulties

The results of the questionnaire types of chemistry learning difficulties are held with data analysis to determine the types of chemistry learning difficulties based on indicators of learning difficulties. Based on the results of the data reduction of this type of learning difficulty interview questionnaire, the number of students who filled out the interview questionnaire was 28 students. The questions are about the indicators of the types of learning difficulties. The following is a table 2 shows the types of learning difficulties in Chemistry.

Table 2. Types of Chemical Learning Difficulties in Class X. E8 Students

No.	Types of Term Comprehension Difficulties	Number of students who answered			Percentage of Learning Difficulties (%)
		SK	DK	TK	
1.	Atom.	1	13	14	50%
2.	Atomic symbol.	2	17	9	67,86%
3.	The constituent particles of the atom are protons, neutrons, and electrons.	2	13	13	53,57%
4.	Isotopes, isotones and isobars.	3	14	11	60,71%
No.	**Types of Difficulty Understanding Chemical Concepts**	**SK**	**DK**	**TK**	**Percentage of Learning Difficulties (%)**
1.	Dalton's atomic structure.	4	12	12	50%
2.	Atomic structure according to Bohr.	2	13	13	53,57%
3.	Atomic structure according to Thomson.	2	17	9	67,86%
4.	Atomic structure according to Rutherford.	2	15	11	60,71%
5.	Atomic structure according to Quantum Mechanics.	1	16	11	60,71%
No.	**Types of Difficulty Understanding Chemical Concepts**	**SK**	**DK**	**TK**	**Percentage of Learning Difficulties (%)**
1.	Differentiate the mass values of protons, neutrons, and electrons.	5	7	16	42,86%
2.	Differentiate the charge values of protons, neutrons, and electrons.	2	15	11	60,71%
3.	Find the number of protons, neutrons, and electrons.	7	5	16	42,86%
4.	Find the number of protons, neutrons, and electrons in ionic form.	4	14	10	64,28%

Based on the table above, it can be seen that there are 3 student answers to the interview questionnaire questions, namely Very Difficulty (SK), Little Difficulty (DK), and No Difficulty (TK). The answer "SK" means that students have great difficulty in the content of the questions asked in the interview questionnaire. The answer "DK" means that the student

has little difficulty in the content of the questions asked in the interview questionnaire. The answer "TK" means that the student has no difficulty in the content of the questions asked in the interview questionnaire. In the type of difficulty understanding the term, it has a percentage of 67.86% or 19 people out of a total of 28 students who have difficulty in understanding the term atomic structure. Furthermore, in the type of difficulty understanding concepts, it has a percentage of 67.86% or 19 out of a total of 28 students who have difficulty in understanding the concept of atomic structure according to Thomson. Furthermore, in the type of difficulty understanding numbers, it has a percentage of 64.28% or 18 out of a total of 28 students who have difficulty understanding numbers to find the number of protons, neutrons and electrons in the form of ions. The following is an explanation of the categorization of the types of student learning difficulties in each indicator.

Difficulty in Understanding Chemical Terms

A term is a word or combination of words that carefully expresses a concept, process, condition, or characteristic in a particular field. If a student does not understand the meaning of certain terms and experiences disabilities as described, then the student will certainly have difficulty in solving verbal problems (Astuti, 2020).

The results of this study showed that 50% of students (14 people) had learning difficulties in understanding the term atom, then as many as 67.86% of students (19 people) had learning difficulties in understanding the term atomic symbol, then as many as 53.57% of students (15 people) had learning difficulties in understanding the term atomic constituent particles namely protons, neutrons and electrons and as many as 60.71% of students (17 people) had learning difficulties in understanding the terms isotope, isoton and isobar. This indicates that students have the highest level of chemical learning difficulties in understanding terms, namely the term atomic symbol of 67.86% (19 people). This is because students still cannot master the terms and sentences in chemistry lessons, especially atomic symbols and students' lack of understanding of sentences and terms in chemistry, so they feel confused while answering questions since only memorize the terms, but do not understand the terms correctly and do not study again at home. So that, in students forget the terms and sentences used. They are categorized as difficult in solving sentence or term problems (Irna, 2017).

Difficulty in Understanding Chemistry Concepts

According to Depdiknas, concept understanding is the competence shown by students in understanding concepts and in performing procedures (algorithms) flexibly, accurately, efficiently and precisely. Students must accurately and thoroughly understand most of the abstract, difficult and material concepts in chemistry and chemistry as a whole. The results of this study indicate that 50% of students (14 people) have learning difficulties in understanding the concept of atomic structure according to Dalton, while 53.57% of students (15 people) have learning difficulties in understanding the concept of atomic structure according to Bohr, then 67.86% of students (19 people) have learning difficulties in understanding the concept of atomic structure according to Thomson, then 60.71% of students (17 people) have learning difficulties in understanding the concept of atomic structure according to Rutherford and 60.71% of students (17 people) have learning difficulties in understanding the concept of quantum mechanics of atomic structure.

The data indicates the highest level of students chemistry learning difficulties in understanding concepts, namely in the concept of atomic structure according to Thomson by 67.86% (19 people). This is because students do not understand related atomic structures according to experts such as Dalton, Bohr, Thomson, Rutherford and quantum mechanics. Due to the lack of understanding and pay less attention to the material presented, the student

was tended to search on the internet. So that students can be categorized as difficult in solving concept problems (Irna, 2017).

Difficulty in Understanding Chemical Numbers

Mathematical calculations are an important part of studying chemistry, and students must be proficient in using mathematical formulas or operations. Students often fail to understand the formulas. The results of this study indicate that 42.86% of students (12 people) have learning difficulties in understanding numbers in distinguishing the mass value of atomic constituent particles, while 60.71% of students (17 people) have learning difficulties in understanding numbers in distinguishing the charge value of atomic constituent particles, 42.86% of students (12 people) have learning difficulties in understanding numbers in finding the value of atomic constituent particles (neutral) and 64.28% of students (18 people) have learning difficulties in understanding in finding the value of atomic constituent particles (ions).

This indicates that students have the highest level of difficulty learning chemistry in understanding chemical numbers, namely in numbers in finding the value of atomic constituent particles (ions) of 64.28% (18 people). This is because students do not understand chemical calculation formulas, do not know the basics of mathematics well, and only memorize chemical formulas, but are not applied in problem exercises so that when answering questions students are confused and cannot answer. One example of the problem is finding the value of the particles that make up the atom in the form of ions. Students are still confused in calculating protons, neutrons and electrons (ions) in solving the problem. So that students can be categorized as very difficult in solving calculation problems (Irna, 2017).

Factors Causing Difficulty in Learning Chemistry

The results of the interview questionnaire on the factors that cause learning difficulties in chemistry were analyzed to determine the factors that cause learning difficulties in chemistry based on the indicators of the factors that cause learning difficulties in chemistry. Based on the results of the data reduction of the interview questionnaire on the factors causing learning difficulties, the number of students who filled out the interview questionnaire was 28 students. The questions are about the indicators of the factors that cause learning difficulties.

Table 3. Factors Causing Chemical Learning Difficulties in Class X.E8 Students

No.	Question	Options (%)	
		Yes (%)	No (%)
	Internal Factors		
1.	Is physicality a factor of difficulty in this chemistry learning process?	9 students **(32,14%)**	19 students **(67,86%)**
2.	Is psychology a factor of difficulty in this chemistry learning process?	23 students **(82,14%)**	5 students **(17,86%)**
3.	Is being emotional a factor of difficulty in this chemistry learning process?	20 students **(71,43%)**	8 students **(28,57%)**
	External Factors		
1.	Is family a factor of difficulty in this chemistry learning process?	7 students **(25%)**	21 students **(75%)**
2.	Is the school a factor in the difficulty of this chemistry learning process?	10 students **(35,71%)**	18 students **(64,29%)**
3.	Is society a factor of difficulty in this chemistry learning process?	8 students **(28,57%)**	20 students **(71,43%)**

The table 3 shows the factors that cause learning difficulties in Chemistry. It can be seen that there are 2 student answers to the questionnaire interview questions, namely Yes and No. The answer "Yes" means that one of the learning difficulty factors greatly affects the chemistry

learning process. The answer "Yes" means that one of the learning difficulty factors greatly affects the chemistry learning process. The answer "No" means that one of the learning difficulty factors does not affect the chemistry learning process. The factors that cause learning difficulties in chemistry are internal factors. The first internal factor, namely physical, has a percentage of 32.14% (9 students) who answered physical as the cause of chemistry learning difficulties and 19 students did not choose physical as the cause of chemistry learning difficulties. The second internal factor, namely psychological, has a percentage of 82.14% (23 students) who answered psychological as the cause of chemistry learning difficulties.

The third internal factor, namely emotional, has a percentage of 71.43% (20 students) who answered emotional as the cause of chemistry learning difficulties. Furthermore, the factors that cause learning difficulties in chemistry are external factors. The first external factor, namely family, has a percentage of 25% (7 students) who answered family as the cause of learning difficulties in chemistry. The second external factor, namely school, has a percentage of 35.71% (10 students) who answered school as a cause of chemistry learning difficulties. The third external factor, namely the community, has a percentage of 28.57% (8 students) who answered the community as the cause of chemistry learning difficulties. The following is an explanation of the categorization of the factors that cause student learning difficulties in each indicator.

Internal Factors

Internal factors are factors that come from within the individual and can affect individual learning outcomes (Sitinjak, 2016). Internal factors include things such as physical, psychological, mental, emotional, bad habits, and lack of basic knowledge and abilities that affect learners at a personal level.

The results of this study indicate that the first internal factor, namely this physical indicator, gets a percentage of 31.14% of students (9 people) who cause chemistry learning difficulties in students. Furthermore, the second internal factor, namely this psychological indicator, gets a percentage of 82.14% of students (23 people) who are the cause of chemistry learning difficulties in students and the third internal factor, namely emotional indicators, gets a percentage of 71.43% of students (20 people) who are the cause of chemistry learning difficulties in students. This indicates that the internal factor that causes the highest chemistry learning difficulties is the psychological indicator of 82.14% (23 people).

Based on interviews conducted by researchers, the first internal factor is the physical indicator. This indicator gets a percentage of 31.14% of students (9 people) who cause chemistry learning difficulties in students. Based on the results of interviews that have been conducted, this is because there are students who are less heard, but they are placed in the back row. While students who lack vision, for example nearsightedness and farsightedness. So the nearsighted are placed at the back of the table and the farsighted are placed at the front of the table. A learner who is sick experiences physical weakness, so his sensory and motor nerves are weak. As a result, stimuli received through their senses cannot be passed on to the brain (Ristiyani, 2016)

Based on interviews conducted by researchers, the second internal factor is the psychological indicator. This indicator received a percentage of 82.14% of students (23 people) which is the highest factor among the other 2 internal factors such as physical and emotional. Based on interviews that have been conducted, this is because each individual has different talents. Learners who are talented in music may be behind in other fields. Someone who is talented in engineering may be weak in sports. So someone will easily learn what suits his talent. If someone has to learn material other than their talent, they will quickly get bored, easily

discouraged, unhappy. This will be seen in children who like to disturb their friends in class, make noise, do not want to learn, so their grades are low.

Based on interviews conducted by researchers, the third internal factor is the emotional indicator. This indicator received a percentage of 71.43% of students (20 people) who were the cause of chemistry learning difficulties in students. Based on interviews that have been conducted, this is because there are students who lack enthusiasm for academic studies. students who do not want to learn, are lazy, skip class, and lack basic skills and knowledge, such as lack of proficiency in reading and writing, as well as the basics of the chosen study topic (such as English) and have poor work habits and poor study habits. One of the causes of emotional students at school is due to teachers who take authoritarian actions towards their students. Emotionally during adolescence is still in a state of instability because sometimes they are unable to withstand overwhelming emotions such as excessive happiness, anger, pleasure and sadness. Therefore, educators must realize that paying attention to students' emotions is very important because it affects learning outcomes and good or bad student behavior (Hartantia, 2013).

External Factors

External factors are factors that come from outside the individual and can affect individual learning outcomes. External factors include things like family, school and community(Abdulkarim, 2020). The results of this study indicate that the first external factor, namely the family indicator, gets a percentage of 25.00% of students (7 people) who cause chemistry learning difficulties in students. Meanwhile, the second external factor, namely the school indicator, gets a percentage of 35.71% of students (10 people) who are the cause of chemistry learning difficulties in students and the third external factor, namely the community indicator, gets a percentage of 28.57% of students (8 people) who are the cause of chemistry learning difficulties in students. This indicates that the external factor that causes the highest chemistry learning difficulties is the school indicator of 35.71% (10 people).

Based on interviews conducted by researchers, the first external factor is the family indicator which gets a percentage of 25% of students (7 people) who cause learning difficulties in chemistry in students. Based on interviews that have been conducted, this is because there are students whose parents pay less attention to their children's education, are indifferent, do not pay attention to the progress of their children, this will cause learning difficulties. Parents who are cruel, authoritarian, will create an unhealthy mentality for children. This will result in the child being unable to settle down, not happy at home, and he goes looking for his peers, until he forgets to study. Children who lack affection will develop emotional insecurity. Likewise, a harsh, sharp, indifferent attitude will lead to the same thing. Poor family factors also cannot provide a place for adequate learning, where the place of learning is a place for efficient and effective learning. This situation is the opposite of the first situation, where the family economy is abundant. They will be reluctant to learn because they have too much fun. It is also possible that they are too spoiled by parents, parents cannot bear to see their children learn with difficulty. Circumstances like this will be able to hinder learning progress (Slameto, 2015).

Based on interviews conducted by researchers, the second external factor is the school indicator which gets a percentage of 35.71% of students (10 people) who cause chemistry learning difficulties in students. Based on the interviews that have been conducted, this is because the teacher can also be a factor causing learning difficulties because the teacher is not qualified, either in taking the methods used or in the subjects he holds because the subjects he holds are not suitable, so he lacks mastery, moreover lacks preparation, so that the way to explain is not clear, difficult for his students to understand. Furthermore, the relationship between teachers and students is not good. This stems from the nature and

attitude of the teacher that is not liked by the students, such as being rude, angry, mocking, never smiling, not helping children, yelling, and so on. Teachers also demand a standard of learning that is above the child's ability. Furthermore, the curriculum is not good, for example, first, the materials are too high, the distribution of materials is not balanced (grade 1 has a lot of lessons, while the classes above it have few lessons), second, there is a data collection of materials. This will bring learning difficulties for students. On the other hand, a curriculum that suits the needs of the child will bring success in learning (Arifin, 2004).

Based on interviews conducted by researchers, the third external factor is the community indicator which gets a percentage of 28.57% of students (7 people) who cause chemistry learning difficulties in students. Based on interviews that have been conducted, this is because one of them is mass media including: Movies, TV, newspapers, magazines, comic books that are around us. These things will hinder learning if children spend too much time on them, so they forget their duty to learn. Friends hang out the influence is very large and faster into the soul of the child. If the child likes to hang out with those who are not in school, then he will be lazy to learn, because the way of life of those who do not go to school with children who go to school is different. It's the parents' job to keep an eye on them so that they reduce their socializing (Widya, 2021).

CONCLUSION

Based on the research that has been done, it can be concluded that the results of the analysis of the types of learning difficulties and the factors that cause chemistry learning difficulties in 10th Gradestudents of atomic structure material at SMAN 1 Sungai Tarab are as follows. First, the types of chemistry learning difficulties consist of 3 types of difficulties including difficulty understanding terms with the highest percentage of 67.86% on the term atomic symbol, difficulty understanding concepts with the highest percentage of 67.86% on the concept of atomic structure according to Thomson and difficulty understanding numbers with the highest percentage of 64.28% on calculations or numbers looking for the number of values of atomic constituent particles (ions). Second, the factors causing chemistry learning difficulties consist of 2 factors, namely internal factors which include physical factors with a percentage of 32.14%, psychological factors with a percentage of 82.14% and emotional factors with a percentage of 71.43%, and external factors which include family factors with a percentage of 25%, school factors with a percentage of 35.71% and community factors with a percentage of 28.57%.

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