DIFFICULTY IN UNDERSTANDING THE BASIC CONCEPTS OF SCIENCE IN TERMS OF THE ADVERSITY QUOTIENT

(Phenomenological Studies of Student Learning Difficulties)

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Abstract

Learning difficulties in understanding concepts become a problem that must be considered in the learning process, this is due to the lack of hard work of students in the process of understanding basic science concepts. This study aims to describe the difficulties faced by quitter, camper and climber students in understanding the basic concepts of science. This research uses a qualitative approach, the type is a case study. The instruments used in this research are questionnaire response profile (ARP), concept understanding test sheets and interview sheets. The results showed that, (1) students categorized as AQ quitters had difficulty in restating concepts, classifying objects according to certain characteristics, developing necessary and special requirements and applying concepts or problem solving algorithms. (2) Students who are categorized as AQ camper experience restating concepts, have difficulty in classifying objects according to certain characteristics, provide examples and non-examples and develop necessary and special requirements. (3) students categorized as AQ climbers have difficulty in applying concepts or Key words: difficulty, learning, adversity quotient, science

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Introduction

In the learning process, it cannot be separated from the obstacles experienced by the students themselves. Learning difficulties are a disorder for students related to internal and external factors of students that cause difficulties in students, in terms of receiving, processing and analyzing information obtained during learning. When learners have learning difficulties, they experience setbacks in learning. In science learning activities in SD/MI, teachers must be faced with a number of diverse characteristics of students. This lack of understanding of the concept of science is caused by the difficulty of students in responding to the learning provided by their teachers. Some of the findings identify the causes of difficulty learning science according to Khoir are too many foreign terms, the material is too dense, students seem unwilling to have to memorize the material, limited learning media, students are difficult to understand the material without learning media available, teachers dominate learning mastery, teachers' mastery of the material is sometimes still monotonous. ¹

Students do not master the concept of science because of the difficulty of responding to the learning provided by their teacher. Some findings state the cause of students' learning disabilities in learning science in too many foreign languages, too much material so that students seem to dislike it, the availability of media, teachers who tend to dominate learning, weak mastery of the material and boring learning. The science teaching process must pay attention to several things, including the needs of students, the learning environment, the accuracy of teachers in choosing teaching materials and how well the teaching materials are

¹ Imanuel Sairo Awang, 'Kesulitan Belajar IPA Peserta Didik Sekola Dasar', Vox Edukasi, 6.2 (2015), 211–21.

in accordance with the needs of students.² The level of mastery of learning in studying science can be seen from learning achievements which are generally expressed in the form of grades. Lack of mastery of the concept of science, resulting in a low value obtained.3

Based on the results of observations made by researchers on September 20, 2021, conducted in class V of SDN 1 Surodikraman Ponorogo, it shows that there are some students who have learning difficulties in understanding science concepts when carrying out learning. There are some students who do not understand the lesson, there are also those who understand the lesson but if asked the next day they have forgotten a lot. And at the time of science learners there were some students who did not show a good response during the science learning. Students also find it difficult to understand the science material too dense and need the help of learning media so that students can understand the material well.

In the process of overcoming problems, it not only involves a process of thinking, but it also takes a lot of effort and resilience in overcoming difficulties and obstacles when students carry out problem-solving activities in learning. Adversity Quotient (AQ) is an intelligence or ability to survive when faced with difficulties or obstacles and turn an obstacle or difficulty into a challenge to be resolved. Adversity Quotient (AQ) is conceptualized as how much an individual is able to struggle in solving a problem. So that without a strong fighting power, the process of solving problems will be in vain. Because the Adversity Quotient (AQ) is able to show how well we can withstand obstacles and overcome them and become a predictable measuring tool who is able to overcome them and who is not. So that the Adversity Quotient (AQ) has an important influence on the success of a person's life.4

Based on the above problems, this research is expected to be able to find out the learning difficulties of Adversity Quotient (AQ) students whog blessingegori quitters, campers, and climbers in understanding the basic concepts of science and also become a consideration for an educator to pay more attention to the learning difficulties of students based on adversity quotient. So that teachers can give questions to students based on their level of ability.

Method

This research uses a qualitative approach, while this research uses a type of case study research. The samples taken in the study used purposive sampling techniques taken from the ARP (adversity response profile) questionnaire. Through the questionnaire, the criteria for students can be found based on the AQ level. The subjects in this study were class V students at SDN Surodikraman Ponorogo. The number of class V students at SDN 1 Surodikraman Ponorogo is 27 students. Class V students here have a very important role for research. They as respondents from the ARP questionnaire made to measure the level of students in solving problems. From the ARP questionnaire, 3 students will be selected according to the advwrsity quotient category.

The research instrument in this study using interview sheets conducted with class V students of SDN I Surodikraman aims to find out the difficulties experienced by students and how to overcome them. The data collection techniques in this study are in the form of observations, interviews, documentation, concept understanding tests and Adversity Response Profile (ARP) questionnaires which aim to obtain data on student AQ so that with these data researchers can choose research subjects. Data analysis techniques use miles and Huberman techniques whose steps consist of data reduction, data assessment and data verification

² Fifi Faridah, 'Upaya Mengembangkan Bahan Ajar Ipa Dalam Mengatasi Kesulitan Belajar Siswa Kelas Iv Sdn 63 Kota Bima',

Immanuel Sairo Awang, "Kesulitan Belajar IPA Peserta Didik Sekolah Dasar", Vox Edukasi, Vol. 6, No. 2, 2015, 110.
 Ulum Fatmahanik, 'Pola Berfikir Reflektif Ditinjau Dari Adversity Quotient', Kodifikasia, 12.2 (2018), 275 https://doi.org/10.21154/kodifikasia.v12i2.1525.

Results And Discussion

Learning Difficulties of Learners Categorized as Quitter

Learning difficulties are the inability of students to complete the tasks given by the teacher. According to Mulyadi, learning difficulties can be interpreted as a condition in a certain obstacle to achieving learning goals. In solving the science story problem, students must carry out logical and coherent steps. But in reality, the subject of the *quitter* category still struggles when solving the problem of the story. According to Zakariya and Yusof argue that learners make mistakes not that they are weak, but the mistakes that occur are more in the lack of strategies that can be used to solve problems. The lack of ability to understand the language used results in students being unable to solve the problem of re-stating concepts. Therefore, in solving the story questions, participants must understand the problem and know clearly what is being asked and determine the relationship that exists with the problem that has been solved and the understandings that have been had.

The difficulties experienced by the subject are also caused because students are lazy to study at home. This is due to the lack of attention from parents. Parents tend to be indifferent to their child's education so they rarely tell him to learn. The lack of attention from parents causes the child to look for other entertainment such as playing *mobile phones* and *online games*, causing the appearance of personal problems in the subject and low interest in learning. According to Arianto, the presence of *online games* has an impact on students. This game can interfere with learning achievements because it has addictive properties or carries opium. Time that should be used for studying or resting, but tends to be used to play *online games*. This dependence can trigger negative behaviors such as laziness to study and a sense of unease when unable to play *games*.

Subjects who are categorized as quitters can do test questions based on the second indicator of understanding the concept, which is to be able to classify objects according to a certain nature, but the subject has not been able to explain exactly from the answers to the test questions. In contrast to the results of the interview the subject is able to answer the questions correctly and is able to explain in his own language. This is due to the low interest and motivation to learn learners. So they have difficulties when faced with test questions. Low interest of learners can result in laziness at home and not paying attention to the teacher when explaining the material at school. A learner's low interest in learning can cause learners to be indifferent to science learning because they feel they are not important to them. Various behaviors of students such as attitudes that show always chatting with their friends when the teacher explains the material and are easily sleepy or bored when in class. According to Wahyuni, the motivation of students in learning science is still lacking when students are indifferent to learning. Students prefer to be silent if there is unclear material. Students are also not enthusiastic when studying science because they think that the lesson is difficult.8 Meanwhile, according to Nidawati, interest has a very large influence on the learning process of students. If the learning material does not attract the interest of students, they will have difficulty in understanding the material to be studied and vice versa.9

In addition, the subject also experienced difficulties in the principle of developing necessary conditions and special conditions that were used in answering questions. The subject does not know what events are going on and also often forgets about the subject matter. This happens because the subject tends not to concentrate during learning. The loss of

⁵ Eli Mukhlesi Yeni, "Kesulitan Belajar Matematika Di Sekolah Dasar", *Jupendas*, Vol. 2, No. 2, 2015, 4.

⁶ Siti Mahmudah, "Peningkatan Keterampilan Menyelesaikan Soal Cerita Matematika Menggunakan Media Kartu Kerja Pada Siswa Kelas II SDN Purworejo Kecamatan Kandat Kabupaten Kediri", *Jurnal Pinus*, Vol. 1, No. 2, 167.

⁷ Tri Risky Arianto, "Dampak Game Online Terhadap Prestasi Belajar Pelajar", *JUTIM*, Vol. 1, No. 1, 2016, 47.

⁸ Wahyuni, "Analisis Kesulitan Belajar Siswa Pada Mata Pelajaran IPA Di Kelas VII SMP Negeri 4 Terbanggi Tinggi", Jurnal Sains Dan Teknologi, Vol. 1, No. 1, 2018, 25.

⁹ Nidawati "Belajar Dalam Perspektif Psikologi Agama", Jurnal Pionir, Vol. 1, No. 1, 2012, 22-23

concentration during learning causes the subject of the quitter category not to pay attention to the teacher when explaining the subject matter, especially in science subjects. If it is difficult to concentrate, then learning will be useless because it can only waste time and energy. The learner's concentration will make him have learning difficulties.¹⁰

Learners who have personal problems can cause their concentration to decrease. These problems can be solved by providing personal counseling services for problem learners. According to Maliki, the school has a responsibility to help students overcome problems that arise in them. Therefore, guidance and counseling services in schools are very important for teachers to assist students in overcoming the problems they face.¹¹ In addition, the school also needs to establish relationships with parents who communicate actively and help each other to find out the involvement of students in the teaching and learning process, interaction patterns while at school, and problems found in school.

The subject of the *quitter* category has difficulty in applying problem-solving concepts or algorithms. Subjects have difficulty in doing these questions because they find it difficult to accept new lessons. Subjects also rarely study when at home. This is because when you want to learn, there are already friends who invite her to play. The learning behavior of students is so influenced by elements from within the student's self and environment. These two things cannot be separated because the learning process takes place in the context of interaction between students and their environment. According to Hurlock, peers should be able to provide social support in the form of a sense of harmony that makes there is a sense of mutual understanding and understanding of each other's problems, exchanging advice and sympathy with each other. 12 Therefore, as a teacher, he must pay attention to the behavior of students and be able to maintain interest and motivation in learning, by giving freedom to move from one learning to another in learning situations. Therefore, the role of learning motivation is needed because with high motivation, subjects who are categorized as quitters are able to study diligently so as to produce good learning outcomes as well. On the contrary if the subject is less motivated then the subject will not be able to develop the potential he has optimally.

Learning Difficulties of Students Categorized as Camper

Learning difficulties in students of science subjects can be diverted from certain obstacles to achieving learning outcomes. This obstacle can be seen from the learning outcomes of students. The difficulty experienced by the subject in understanding the basic concepts of science is because the subject does not understand the subject matter which results in the subject forgetting the science subject matter. This is because the subject is lazy to study and only studies during exams. Behaviors such as refusing or being reluctant to learn are often referred to as lazy learning. The factors that cause laziness to learn in each learner are not always the same. Oleh karena itu, guru dan orang tua harus mencermati apa penyebab anak malas belajar, sehingga can give proper treatment. Laziness experienced by students is a problem that comes from within the student or a factor from outside the student. According to Khudori, the laziness of students is a formation. This means that the behavior can be reshaped to be good or not lazy. The reshaping of a person's behavior is actually greatly influenced by the surrounding environment, it can be parents, friends or other people around.

Wahyuni, "Analisis Belajar Siswa Pada Mata Pelajaran IPA Di Kelas VII Negeri 4 Terbanggi Tinggi", Jurnal Sains Dan Teknologi, Vol. 1, No. 1, 2018, 25.

Maliki, "Implementasi Layanan Bimbingan Dan Konseling Dalam Mengatasi Kesulitan Belajar Siswa Sekolah Dasar Negeri

Serayu Yogyakarta", *Jurnal Al-Tazkiah*, Vol. 7, No. 1, 2015, 2.

12 Novi Nitya Santi Dan Rosa Imani Khan, "Pengaruh Dukungan Teman Sebaya Terhadap Motivasi Belajar Siswa Kelas III Sekolah Dasar", Jurnal Pendidikan Dasar Nusantara, Vol. 4, No. 2, 2019. 193

So in changing a person's behavior the most basic thing is to change his perception. For this reason, it is necessary to learn and take a new value system for him.¹³

In providing examples and non-examples The subject of the category camper can answer the questions on the answer sheet. But the answer given by the subject is still not included in giving an example and is not an example of a heat displacement event. The difficulty experienced by the subject in understanding the basic concepts of science is because the subject has difficulty in receiving lessons. This is due to the fact that the subject has difficulty digesting and absorbing the learning information provided by the teacher. Teachers who do not use teaching aids in teaching can also make students have learning difficulties. 14 This certainly makes students bored when the teacher explains the subject matter. Learners also have difficulty in accepting the subject matter because they are sleepy.

Furthermore, the difficulties experienced by the subject in developing necessary conditions and special conditions are due to the subject being lazy to read the subject matter which results in the subject being unable to answer the science lesson questions. This is due to the fact that the science material is too dense and uses a lot of foreign languages that make the subject lazy to read the material. According to Awang, the science material is dense and difficult to understand. Difficulties are experienced when they find a foreign language, the use of formulas that must be memorized, and students still find it difficult when calculating. In addition, their inability to the subject matter presented by the teacher and those listed in the book makes it difficult for them to accept science material.¹⁵ According to Syahrani, to overcome the problems faced by students who are bored during the lesson because the science material is dense, a teacher can insert an interesting story in between science learning. The delivery of the story will attract the attention of students so that they are willing to pay attention to the explanation from the teacher. Meanwhile, according to Tambak, the storytelling method has advantages compared to other methods in the learning process in the classroom. The advantages of the storytelling method include activating and raising the spirits of students, alluring, influencing emotions, imprinting in the soul and attracting the attention of students.16

Therefore, being an educator certainly has several ways to pour the subject matter to make it more fun. Therefore, the importance of applying learning methods that aim to help students in understanding the material in a fun way is very necessary in learning activities. It can also provide completeness in achieving learning objectives.

Learning Difficulties of Learners Who Are Categorized as Climbers

Based on the results of the study, it is known that students who are thanks to *climbers* have many advantages from quitter and camper students. Climber students have been able to complete the concept comprehension test questions with results that almost all were answered correctly. The subject of the *climber* category can actually answer the questions on the answer sheet. But the answers given by the subject still do not include indicators of applying concepts or problem-solving algorithms. The difficulty experienced by the subject in understanding the basic concepts of science is because the subject is not in a hurry when doing science questions. Thus resulting in the answers of students not as expected. This is because the subject's physical condition is exhausted so that he answers with no concentration.

Fatigue or physical condition generally greatly affects the learning ability of students. A person who is in a state of physical freshness will learn from one who is in a state of

¹³ Khudori, "Psikologi Komunikasi Rasa Malas Dalam Diri", (Jakarta: Rineka Cipta, 2015), 17.

Abu Ahmadi Dan Widodo Supriyono, "Psikologi Belajar", (Jakarta: Rineka Cipta, 2008), 87
 Immanuel Sairo Awang, "Kesulitan Belajar IPA Peserta Didik Sekolah Dasar", Vox Edukasi, Vol. 6, No. 2, 2015, 109-119

¹⁶ Syahrani Tambak, "Metode Bercerita Dalam Pembelajaran Pendidikan Agama Islam" Jurnal Al-Thariqah, Vol. 1, No. 1, 2016,

exhaustion. The fatigue referred to here is generally the fatigue experienced in the classroom while studying, one of which is boredom which is psychic fatigue. There is also fatigue brought from outside that is seen during learning, for example, drowsiness due to staying up all night and feeling anxious because of restlessness. According to fauzi, fatigue caused by spiritual labor is distinguished by the symptoms of a tired soul. For example, tired of thinking, tired of fantasizing, tired of remembering and bored and ignorant. Spiritual fatigue can be seen in the presence of lethargy and boredom. So that the interest and drive to produce something is felt in the head with dizziness so that it is difficult to concentrate, as if the brain is out of power to work. Spiritual misgivings can occur constantly thinking about problems that are considered severe without rest, facing things that are always the same or constant without any variation and working on something because it is forced and does not match his talents, interests and attention.¹⁷

So that students do not experience fatigue in learning, parents must be able to overcome fatigue at school and ensure that students can learn optimally, including by ensuring students with adequate rest. Rest is essential to calm the minds of learners. Lack of sleep can also interfere with the optimal learning process, concentration and development.

Conclusion

The learning difficulties of learners who are categorized *as quitters*. The subject *of the quitter* is incapable of re-stating the concept of the heat displacement event. The subject also did not understand well the concept of the heat transfer event, so in answering the test questions, the subject only wrote down a little information contained in the questions without interpreting the questions given. The difficulty of classifying objects according to nature in analyzing heat transfer events in everyday life, because the subject does not analyze the problem precisely. Another difficulty that the subject faces is that the subject is not able to explain the results of his thoughts to write down on the answer sheet. Difficulty developing necessary conditions and special conditions in explaining heat transfer events. The subject has difficulties because they do not understand the question well, besides that the subject often forgets when it comes to answering the question. The difficulty of applying the concept or problem solving of algorithms in determining the type of heat displacement is because the subject cannot distinguish events from heat displacement. The subject also has difficulty in explaining the meaning of the question.

Learning difficulties of students who are categorized as *camper* Subjects who are categorized as *campers* are able to answer questions about heat transfer events in everyday life, but the subject has difficulty in re-stating concepts because the understanding of the concept of heat transfer events is still lacking. The subject has difficulties caused because he often forgets. The difficulty in providing examples and examples of heat transfer events is due to the subject's lack of careful reading of the problem. The subject is also often forgetful when it comes to explaining a subject matter. This is because the teacher's teaching pattern is less effective in the learning process The difficulty of developing necessary conditions or sufficient requirements for a concept in explaining the event of heat transfer is caused by the subject being lazy to repeat the lesson and bored with learning science. The subject also has difficulty when it comes to explaining from the heat displacement material.

Learning difficulties learners who are categorized as *climber* subjects who are categorized as *climbers* have difficulty applying concepts or solving algorithms in determining the type of heat transfer this problem can occur because the subject has a disturbance from his physique that is when feeling exhausted.

¹⁷ Ahmad Fauzi, "Psikologi Umum", (Bandung: CV Pustaka Setia, 2004), 43

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