

Dislike of mathematics amongst secondary students



DISLIKE OF MATHEMATICS AMONGST SECONDARY STUDENTS

1. INTRODUCTION

Why do kids, students and adults seem dislike mathematics? It is quite common for small children to say “ I love numbers”. Do they really know exactly what mathematics is?

We always see small children counting numbers from 1 to 10, even sing a song make up from the numbers. But what happen to these children as they grow up? What make them to change their mind to dislike mathematics? Some will roll their eyes or let out a sigh. They give so many reasons, such as “ It’s too hard,” “ I’m not good at math,” or “ why do I even need Mathematics?” Where does this attitude come from?

After being a Mathematics teacher for about 3 years, I have discovered that almost all students in Brunei Darussalam claimed to “ hate mathematics”. This can be seen from their attitude in the class, interaction with the teacher and also the students’ progress report. The very much sad thing is that students just want to pass the examination without understanding why they have to study mathematics. Still mathematics has the highest failure rate of any subject at school-leaving level. Why does mathematics seem to inspire fear and intimidation in students in secondary schools and even when they are in the higher level.

In my childhood, I still remember is that I was not taught how to study mathematics. Like any subject the study of mathematics becomes a pile of information. But if you are taught how to study mathematics then you will never find this problematic. Mathematics cannot be taught one way.

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Students always stick to the method being taught without seeking the alternative way of the working. These kinds of attitude make mathematics become “ strict to the rule method”.

One funny culture about students in Brunei, it is an “ honor” for them to admit they are not good in mathematics, but who would ever admit to NOT being able to Read? This has been passing from generations. Math is an essential subject to maintain our modern way of life. Without mathematics, not much would be possible. So why is it acceptable to become a failure at mathematics? They believe that mathematics only belongs to gifted or genius who wants to become a mathematics teacher, doctor, professor, engineer and lots more.

2. Real Scenario in Brunei

From my previous experience as a Mathematics teacher, students in Brunei especially weak classes, tend to show their unwillingness at the start of the lesson. Students still keep wandering around during teacher presence in front . Students are expected to be ready for lesson the moment the teacher steps into the classroom. Textbooks, exercise books and any materials as required by the teacher are to be placed on their desks.

Action is usually taken on persistent students who always forget to bring their learning materials, the purpose, which is to teach and instill self-responsibility in the students. However, there are also some students who do not care about the warning given by the class teacher.

First task when teaching a class is to correctly understand the students' background, their expectations from the course and their willingness to do

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the required efforts. May be this can be done by conducting a survey or simply just ask them personally.

At the beginning of the lesson, for upper secondary level, students will find the topics quite new for them. It is quite a common scene to see students lost their direction at the beginning of the lesson. It is the job of the teacher to interact with them and try to relate the topics to everyday life. What I can say here, the level of ignorance of the students very high towards the subject Mathematics. Students who show interest in studying Mathematics at the beginning of the lesson may also somehow lost their direction as the teacher goes deeper into the subject matter.

Students are also required to submit their homework on time. Usually, I begin the lesson by reviewing the homework that has been set during the previous class. Some students do not submit due to difficulties that the students have. Generally teachers are very strict with deadlines for the submission of homework.

Overall, there is always a sentiment of anti-mathematics in every class that I taught which can be seen from all aspects of the students. In the next pages, I will explain more on the factors that rise up this critical issue of mathematics.

3. Sign of having problems in Mathematics amongst the students

A student with problems in mathematics may shows one or more of the following below:

1. unable to recall basic mathematics rules, or formulas even the teachers have explain repeatedly
2. having difficulties in understanding mathematical work and spend long time in learning simple topics
3. Very low esteem which can seen from their handwriting which is hard to read.
4. Have difficulties in remembering previously encountered questions which have been attempted many times before.
5. Have problem in recall what have been taught in previous class
6. Not confident, hesitate and forget what he or she is doing in the middle of a math problem
7. Have difficulty with the language of mathematics and easily being confused.
8. The students do not know when/how to use the correct theorem/formula for mathematical problems.
9. Easily lost direction or concentration whiles the teachers teaching in front.
10. Have difficulty explaining and communicating about mathematics, including asking and answering questions.
11. Escape or absent from class, late submitting homework and fail in mathematics are one of the most common behavior of problematic students towards mathematics.

4. The factors that make students dislike Mathematics

A. Sequential in nature.

Mathematics is sequential in nature. That means that when we learn one concept , knowledge or skill, it will be needed in another topics. This is <https://assignbuster.com/dislike-of-mathematics-amongst-secondary-students/>

basically true when students who have not mastered a preceding skill have difficulty in learning new work. Students might feel discouraged by this continuous learning and exhausted throughout the process. Obviously, students who have strong basic knowledge will be able to do mathematics problem much faster compare to students who are not.

Students find math to be hard is because it is usually not taught correctly, and it is usually not studied correctly. Mathematics needs to be learned step by step, topic by topic. If a student does not completely understand a particular topic, there is no point in moving on to a harder topic that requires knowledge of the first topic.

It is typical in Brunei, there is very little time to review back the old materials in school. It is up to the student to recognize if the students do not fully understand a particular topic, and to go for tutoring. In most cases, this doesn't happen, and the student gradually becomes more and more confused and discouraged.

Another problem is that students are promoted from one grade to the next, even if they are not at all close to being ready for the next grade's work. There are a variety of reasons why this happens, none of which are the focus of this editorial, but I'll just say that until we stop pushing kids into classes that they aren't ready for, the education crisis in this country will continue and get worse.

Mathematics is a subject that requires a tremendous amount of thought and patience. Weak students typically rush through their mathematics homework, and declare it to be "done," The students not even check the <https://assignbuster.com/dislike-of-mathematics-amongst-secondary-students/>

working properly and not even thought of the answer. The following day in school, the teacher will review the homework very quickly, and then just move on to a new topic.

B. One answer concept

Mathematics is an exact subject. Normally, students in Brunei will take 8 subjects during their secondary level and Mathematics is the only subject that requires long working but yet only one acceptable answer. Many students have trouble with the exactness of mathematics. For them, what is wrong is always wrong and vice versa.

Students always thought that “ Doing mathematics means getting one right answer,” “ Mathematics is a collection of rules, theorems, and procedures to be memorized,” and “ Teaching math involves working through the textbook page by page and assigning drill exercises from the workbooks or worksheets for practice.” As a result of belief in these myths, many students are convinced that they cannot do math.

Students are very fragile at this stage, they rather concentrate on the subjects that not required drilling like mathematics and give up mathematics. But the students do not know that mathematics can become more interesting as they go further, mathematics is not just getting the right answer.

C. Math Phobia

“ I’m not good at math”, “ I hate math” or “ math is too hard” are common phrases heard by teachers and parents. One of the symptom is s/he does not want to do any class work. When the task is easy, s/he tries to do the work

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but never completes the assignment. Sometimes, s/he gets frustrated and says that s/he is stupid because she just doesn't understand math.

Anxious individuals may avoid mathematics classes, may be more likely to have negative attitudes toward mathematic related activities. This type of students seems to suffer from math phobia also known as math anxiety.

Mathematics anxiety means the students fear that one won't be able to do the math or the fear that it's too hard or the fear of failure. The students had very negative experiences in her mathematics class that the students failed before. May be the previous teachers might have had ignored this type of students that lead to lack self-efficacy.

D. Difficulty Transferring Knowledge(connection with reality)

One very common difficulty experienced by students with mathematics problems is the inability to connect mathematics concept to the real world. In school, this can obviously be seen when we give questions which involve loss and profit gain of purchasing products to the students. Only few of them can deeply understand what is meant by loss and gain. The fear of mathematics makes them uneasy to relate mathematics problems to their everyday life.

In ' O' level Mathematics Examination, it is about 20 percent in paper 1 dealing with everyday life mathematics and the students always fall into these tricky questions. They spend long time in solving this and sometime to a halt. Students do not believe that directly proportion rules can be used in our life when buying goods. What I try to say here is that, the students do not trust the power of mathematics and how mathematics can benefit us.
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Students usually are not aware that mathematics is everywhere in this world and it is unavoidable for them to meet Math problems in the real world.

Whenever they go to the shop, students normally do not bring the knowledge they have gain in school with them. They thought that mathematics exist only in school just for the sake of the examination.

E. Less motivation

The last but not least, students have less motivation when come to studying mathematics. The word “ lazy” is very common given to the students who do not submit their homework. Lengthy working and long formula become a burden for them. Not all students who are weak in mathematics because they have problems with the subject but due to lack of motivation from the teachers and also the parent.

It is quite common to encounter students who do badly in mathematics but excel in other subjects. In some case, the students do give up in studying mathematics and even choose not to involve in the fields that required Mathematics. There are also students who just escape the mathematics class just to avoid this important subject.

Less motivation will lead the students to less confident in doing mathematics problem and as the days goes by, they see mathematics as a subject that make the feel down.

F. Incomplete Understanding of the Language of Math

For some students, dislike of mathematics is driven by problems with language. These students may also experience difficulty with reading, writing, and speaking. In mathematics, however, their language problem is

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due to the topics itself example matrices, simultaneous equation, vector and some of which they hear nowhere outside of the math classroom. These students have difficulty understanding written or verbal directions or explanations.

5. How to overcome students who dislike mathematics

a) Teach basic concepts using concrete objects.

Let students learn mathematics in which they can feel and experience themselves. Learning probability will become more interesting by allowing them using marbles, cards and colored balls. Students will tend to remember more which help them to understand the concept easily.

b) Provide specialized materials.

As a teacher it is important to use correct materials for the students. For example, using graph paper will help the students in drawing the axes and plotting the points. Scrap paper can also be used to encourage the students to do working for every mathematics problems. Teachers should aware the students to be more organize in doing there working and emphasize the important of discipline in mathematics.

c) Practice student-centered.

Ask the students the procedures they would like to use when solving a problem, and guide each procedure for them. The interaction between students and teacher will somehow help in the learning process. By doing this also, the teachers will know the weakness, the strength of each of the students and the confusion they leading to.

d) Use cooperative math-problem-solving activities.

To overcome dislike of mathematics, teachers should give opportunities for students to work in groups when solving math problems. The students will gradually gain their confidence by sharing their thinking aloud as they solve problems.

e) Provide time for reviewing their work.

Teachers must emphasize that completing math assignments is a process. Encourage students to become comfortable reviewing their work, making changes, or asking questions when they are unsure of their answers.

f) Connect mathematics concept to the real-world.

Teacher must understand that mathematics is always a problem for students. By connecting mathematics problems to the everyday used will be very helpful to the students. Students can easily digest the mathematics concept and even apply to themselves. For example in studying statistics, we can ask the students to make a case study of population in Brunei or how to use percentages to understand the price of a jacket on sale at the mall or the amount of their allowance spent on snacks.

6. My conclusion

From my own understanding, with the widespread dislike of mathematics, it is not the job of educator only but also the society on changing these negative attitudes. I suggest that teachers should focus on improving the classroom affective environment and mentally motivate the students to foster positive attitudes in mathematics. As a parent, they must understand that gaining knowledge is not only at school but also need to be cultivated at home.

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