ADDING LOVE, SUBTRACTING FEAR

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"I HATE MATHS!"

These strong words greeted me one Thursday morning when I entered my classroom a few days after the Primary 5 Mathematics Final Year examination. These words were not said to me but written on the wall at the back of my classroom.

I found myself wondering whether I had failed in my role as a teacher. What caused my student to write this? Why did my student have such negative feelings towards the subject I was teaching?

Listening with your heart

Instead of dismissing the graffiti on the wall as a childish prank, I took pains to find out who had written those words. Close to the end of the day, Kelly approached me and apologised for writing the words.

I was shocked. Kelly* was one of most obedient and responsible students in class. A very conscientious girl, she was the last person I would have thought of as the culprit. Mathematics was her weakest subject but I never thought her negative feelings towards the subject were so strong.

In my conversation with her to understand why she hated the subject, Kelly shared that her parents would always revise the subject with her before the exam. She was demoralized, stressed and on the brink of giving up as she felt she had disappointed her parents by failing the subject despite their efforts.

This was a huge wake up call for me. I have always thought that as long as I teach a subject with passion and drive, students would be influenced and love the subject just as much as I did.

With less than a year to make an impact in her life, I knew I needed to do something to remove Kelly's psychological and emotional barrier towards Mathematics. Together with Kelly's parents, we worked out bite-sized targets for Kelly and helped her take small steps towards achieving her goals. Gradually, she began to overcome her hatred for Mathematics and eventually scored an A in the subject at PSLE.

She wrote me an email when she graduated.

"Now, I no longer feel Maths is boring, but I feel amazed by the magic of it. I am also not getting Cs and Ds anymore. I am still not good enough to get an A but I got an A. I really want to thank you for all you have done."*

It is moments like this that really spur me on as a teacher and remind me why I joined this profession in the first place. Through this whole experience, I have really grown as a teacher. I have realised the importance of listening with a heart in order to understand the root of a problem.

Math and Music

Students will not achieve their academic potential because of psychological or emotional barriers towards a subject. Until we work with them to overcome these issues, they will continue to struggle with the problem.

I strongly believe that enabling students to love the subject is one way we can help students overcome these barriers. In my pursuit to help students learn, understand, and most importantly, love Mathematics more, I explored using Music to teach the subject.

I came across this quote while doing research earlier on in my teaching career.

“Bringing music into the math classroom is a multimodal approach to early fraction instruction and could encourage a deeper understanding of fraction reasoning because students are introduced to fraction concepts in fun and engaging ways.” (Courey, 2012)

It is because of this quote that I decided to take on the challenge and spearhead the Music in Mathematics Action Research Project in my school. I observed that one of the topics that many of my students struggle with in Mathematics is the concept of fractions. I also realised that these same students enjoy and love music.

As a music teacher, I saw the correlation between music time signatures and fractions. Bearing that in mind, I incorporated music into my Mathematics lessons. I proceeded to conduct an action research. In the post-perception survey, the students gave feedback that they began to find the subject more interesting. It was no longer a scary subject to them! Their feelings towards the subject and their results had also improved.

A mother of one of my former students observed her daughter’s attitude towards Mathematics improving. She shared that her daughter now strives to solve Mathematics problems and will look through other worked problem examples in assessment books as reference.

Through this experience, I learnt that the learning needs of students are constantly evolving and as a teacher, I must constantly rethink, reframe and reflect on my current pedagogies in order to further motivate and inspire students to realise their fullest potential. Only then can we, as educators, truly make an impact on their future.

**Name has been changed to protect the identity of the student.*