MATH GOES SPIRAL

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There have been many views on Mathematics which result to its multiple and varied definitions. Aristotle, who was one of the pillars of Greek philosophy and who lived long ago (384 BC to be exact), with his name stills flags until the present time, left a legacy through his contributions to many disciplines such as logic, metaphysics, physics, biology, botany, ethics, politics, agriculture, medicine, dance, theatre, and the ‘acclaimed’ king among all of the subjects – Mathematics. Aristotle defined Mathematics as ‘the science of quantity.’

On the other hand, Albert Einstein, another renowned genius in the world of Mathematics stated that “Pure mathematics is, in its way, the poetry of logical ideas” meaning Mathematics leads mankind to the understanding of the world.

But if a learner is asked on his/her own definition of Mathematics, it is with high probability that he/she will tag the subject as the most difficult one. This is unsurprising with surveys frequently revealing the negative view of students towards the subject.

Justin Smith (2017), a Mathnasium instructor, in his article entitled “Top 6 Reasons Math is Hard to Learn” shared his take on why some kids struggle in Mathematics. One notable among 6 stated explanations was “understanding the method but not the reason leads to forgetting.” This reason is irrefutable in the sense that Mathematics connection to real-world scenarios is hardly understood by majority of the students. Oftentimes, students’ curiosity is always stirred on whether Mathematics can be useful outside the four walls of the classroom. Another reason that teachers may find precise is that “Math builds on itself.” Mathematics is a chain of concepts. It comes in sequence where one concept leads to another. Thus, one cannot proceed to the other without going through its prerequisite. This now poses a dilemma in the Philippine setting (specially the educational institutions situated in remote areas) where poverty has been a perpetual
problem, learners’ one of the main reasons in failing their subjects is absenteeism. This premise apparently aggravates the complication in Mathematics.

Reasons, if written down, why Mathematics has been the steady headache of every student will be surely a long list.

Though this may be held true in today’s situation, it is quite just to note the achievements of Filipino Mathiniks in the past international competitions. There was the time when Philippines ranks last as reports stated.

Conversely, when the K to 12 curriculum was implemented, there has been a conspicuous an improvement as to the quality of Mathematics education. In the 2015 Singapore Math Competition, Filipino representatives from both public and private schools won over China and Taiwan. In the same year, Philippines placed second in the China Math Olympiad beating only China though falling behind Hong Kong, Thailand, Taiwan and Macau.

According to the critique Isagani Cruz of Philippine Star, the Mathematics Trainers Guild Philippines (MTG) contributed to the victories for conducting national competitions to choose the line-up for the Philippine team. Department of Education (DepEd) must also be acknowledged for continuously improving the Philippine Educational System. Though at first, K to 12 was not completely accepted and earned negative remarks, the fruit of this change is unquestionable though the entire outcome is yet to be known. This upcoming academic year end with the first batch of grade 12 students graduating will mark the success and milestone of the curriculum.

The upsurge on the quality of Mathematics Education may be rooted down to the spiraling of content of the new curriculum. Spiraling refers to a teaching approach where the same topics are taught in every grade level, but the level of complexity increases. Some of the perceived benefits of this approach are (1) it helps reinforce learning, (2) it allows a logical progression from simple to complex ideas, (3) it encourages students to apply their previous learning to later topics and new situations, and (4) it helps learners appreciate the connections among the different content standards.
The spiral approach provides multiple opportunities for learners to gain mastery for they will be exposed with the same content as the lesson progresses. The same positive outcome goes on the part of the teacher, the teachers will know the standing of the learners - which part are they strong in, and which part needs reinforcements.

In truth, no subject is difficult if given a hard try coupled with a suitable approach.

References:

