BLOCK MODEL AS AN APPROACH IN TEACHING PROBLEM SOLVING

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Many students consider Mathematics as a difficult subject to study. Mathematics is still considered to be boring and too abstract despite its importance and use. But why do students find Mathematics hard to learn? What are some of their difficulties? How can they be helped? These questions post a significant challenge to Mathematics teachers today.

Mathematics involves problem solving skills which prove to be difficult for many pupils. Researches show that the difficulty can be attributed to understanding Mathematics Language. Students struggle in comprehending the Math terminologies and vocabularies in written or verbal form. Another factor is inconsistency in computation. Students misread signs and symbols, carry numbers wrongly, or sometimes putting the numeral in the wrong column. At times, students also have difficulty in arithmetic operations. They are unable to remember facts, procedures or formulas. Lastly, students have difficulty in analyzing word problem. They cannot perform the challenge of a complex problem.

The abovementioned difficulties should be taken into consideration in planning a lesson. Teachers need to determine how to approach every learning competency, the
teaching aids to be used, through using the most effective method to help struggling students understand the concepts and principles presented.

In this modern times, one popular problem solving tool that can be used by teachers to teach many challenging word problems is through the Block Model Approach widely known as Singapore Math. It is introduced in 1983 by Dr. Kho Tek Hong and his team of educators from Singapore Ministry of Education. It uses strips, bars, or rectangular regions called models to visualize concepts. It is useful in exposing pupils to respond better to visual stimuli (e.g. illustration, drawing, picture, etc.). According to Kho (1982), “This bar model method helps pupils gain concrete experience which are prerequisites for understanding abstract symbols of Mathematics and their manipulation.” The model helped the pupils solve Mathematics problem that were traditionally for higher levels only. Its effectiveness has gone beyond helping Singaporean students, it is now widely used around the world.

Findings in various studies conducted in the Philippines, like the study of De Guzman (2015) entitled Block Model Approach in Problem Solving: Effect in Problem Solving Performance of the Grade V Pupils in Mathematics confirmed the effectiveness of Block Model Approach in teaching the word problems. The retention of concepts learned are enhanced. The pupils performed better in answering problem solving. It is perceived to be easy to use in solving word problems. Lastly, it showed that Block Model Approach can be used as an alternative approach in teaching problem solving.
This is just one of the many approaches that can be employed in teaching Mathematics. Teachers must understand that there are varied ways to teach Mathematics to help struggling students grasp difficult concepts. Teachers are called on to continue to adopt and use new curriculum materials, active learning approaches and current methods of teaching proven to be effective with today’s learners.

References:


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