Singapore math

Science, Mathematics



Singapore Math Singapore Math Introduction Singapore a located in the southeastern part of Asia to the south of Malaysian peninsula is famous for its equatorial climate, sea port, cultural diversity and religious acceptance, distinctive skyline, technological advancements and landmarks achieved in the field of commutation and automation and for being host to the head quarters to great Multinational Corporations like Barclays Capital. Many of us would be astonished to read that Singapore is also known for its special teaching methodology that encircles the training of human mind with a specific method of teaching known as the Singapore Math. History The history goes back to 1995, 1999, 2003 and the recent times when Singapore gained world attention regarding its distinctive methods that empower the pupils to standout from the crowd when it comes to number crunching and playing with mathematical equations and enigmas. Trends in International Mathematics and Science Study (TIMSS) is an international body that assesses Year 5, fourth grade, and Year 9, eighth grade pupils from across the globe on their level of understanding and processing of numeric and scientific information. TIMSS came into existence in 1995 when International Association for the Evaluation of Educational Achievement (IEA) formulated a framework to provide a platform to member nations to participate on equal grounds to prove supremacy over each other in the educational arena and to share knowledge with each other and to improve or maintain educational standards within their countries as per the outcomes of TIMSS. Singapore secured the first position in the inaugural TIMSS comparison assessment in 1995 and continued the legacy in 1999 and 2003. As per the recent TIMSS rankings of 2007 Singapore is ranked among the top 3 countries in the fields

of Mathematics and Science both. This consistent and standout performance of Singapore at TIMSS rang a bell among the participating/ member countries; and these outcomes were stark enough for them to realize that either there is something that Singapore does uniquely or these countries do poorly, while setting out and executing their curriculum. Several studies were made to unveil the competitive advantage of Singapore in teaching mathematics and science to their students with great effectiveness. Out of the many studies conducted one came up with interesting findings (Clark, 2008). Why Singapore Outperforms The study revealed that Singapore follows a coherent national curriculum that is followed and executed in all the educational institutions in Singapore a like without any amendments or deviations. Professional trainings for teachers also play a vital role in translating the efforts made by policy makers in to outstanding and flourishing outcomes such as those mentioned in the opening paragraphs of this paper. The teachers are trained in assisting and grooming the pupils in making the best use of their brains and making calculations manually without using the calculator in the quickest possible time. The teachers make the students learn mathematics in an amicable and joyful manner. Students enjoy playing with numbers and participating in exercises that require a lot of mental math as part of their everyday routine at school. Similarly there is something even more interesting and distinctive that was discovered (Hu, 2010). The local population is itself very aware of the significance of mathematics and its positive correlation with the prosperity and growth of an economy. Therefore the parents and guardians take personal interest in making their children learn mathematics and master the art of solving

everyday problems using numbers and rational thinking (Clark, 2008).

Another outstanding feature of the Singapore Mathematics curriculum is the emphasis on problem solving. Slowly and gradually this has been adapted by many other Asian and Western countries but not with the pace and expertise as it is implied and executed with, in Singapore. Right from a very young age and grade pupils are made to handle word problems. Solving a mathematical question with only numbers is comparatively much more easier then solving a mathematical question where the numbers are shaped up into scenarios. Here the pupil is not only subjected to the task of solving numbers but this entails the process of interpreting information, bringing out the numbers from sentences and then solving the numbers to get to the outcome. This is the procedure that helps Singapore standout from other countries (Landsberg, 2008). Participating in class discussions to solve the problems and making students form groups also help the students to broaden their horizons and develop a better understanding of the numbers. Working in groups helps the pupils to participate more, be more vocal and confident while dealing with numbers, not only in class but also in the real world and this is what matters the most (CKF, 2010). Conclusion The Singapore Mathematics teaching methodology has inspired a great many countries including the United States and UK. These countries have reformed their curriculum and teaching methodology a great deal to accommodate the Singapore philosophy into the minds of their students. However the change that needs to be pinned in to match the high standards set by Singapore is the change from within the people of the country. The populations need to understand how important it is to master the art of playing with numbers and solving problems involving big numbers within fraction of seconds.

References Andy Clark, (2008). Problem Solving in Singapore Math.

Retrieved from http://owl. english. purdue. edu/owl/resource/560/01/ CKF, (October 6th 2010). Singapore Math is Our Dirty Little Secret. Retrieved from

http://blog. coreknowledge. org/2010/10/06/singapore-math-is-our-dirty-little-

secret/ Mitchell Landsberg, (March 9th 2008). In L. A Singapore Math has

added Value. Retrieved from http://articles. latimes.

com/2008/mar/09/local/me-math9 Winnie Hu, (September 30th 2010).

Making Math Lessons as Easy as 1, Pause, 2, Pause, . . Retrieved from

http://www. nytimes. com/2010/10/01/education/01math. html