

Use scores to strategise better education plan

Now that we know how Malaysia stacks up against other TIMSS 2019 nations, it's time to focus on getting better

The Discourse

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ACCESS to quality education has been listed as the fourth Unesco Sustainable Development Goal (SDG4) but it is only through some form of benchmarking exercise that we are able to gauge whether we have met the standards set.

Among such assessments is the Trends in International Mathematics and Science Study (TIMSS), which is conducted in over 60 countries.

The TIMSS paper and computer-based assessment has indicators that overlap with SDG4 and continues to be referred to in evaluating the quality of education, specifically education that is related to Mathematics and Science, said Universiti Putra Malaysia Faculty of Educational Studies dean Prof Dr Samsilah Roslan.

"As the world becomes increasingly borderless by the day, best practices are shared more widely and common standards are being used to benchmark progress and achievements," she told *StarEdu*.

These best practices, she said, must be studied and emulated locally.

Countries like Singapore, Taiwan, South Korea, Japan, Hong Kong and Russia are in the top rung and should be closely looked at.

"Singapore has been topping the TIMSS table since 2003. The results reflect not just the education approach, but also multiple other factors such as the learning and teaching environments, and perhaps the capability of the students themselves."

Overall, she said the indicators in the TIMSS 2019 Mathematics and Science Framework are robust and include not just achievements but also knowledge and skills acquisition for the sustainable development of learning and teaching environments.

"Only by scrutinising the bigger picture and mapping ourselves against analyses done by other countries can we properly understand trends and patterns," she added.

Although other countries did well, Prof Samsilah said some Malaysian students also achieved excellent scores in the assessment, proving that we too have the ability to do well.

"There are a number of Malaysian students who scored above 700 for eTIMSS and paperTIMSS in Mathematics and Sciences," she added.

"The success factors of these students should be further studied and emulated to assist more Malaysian students in enhancing their learning of both subjects," she said.

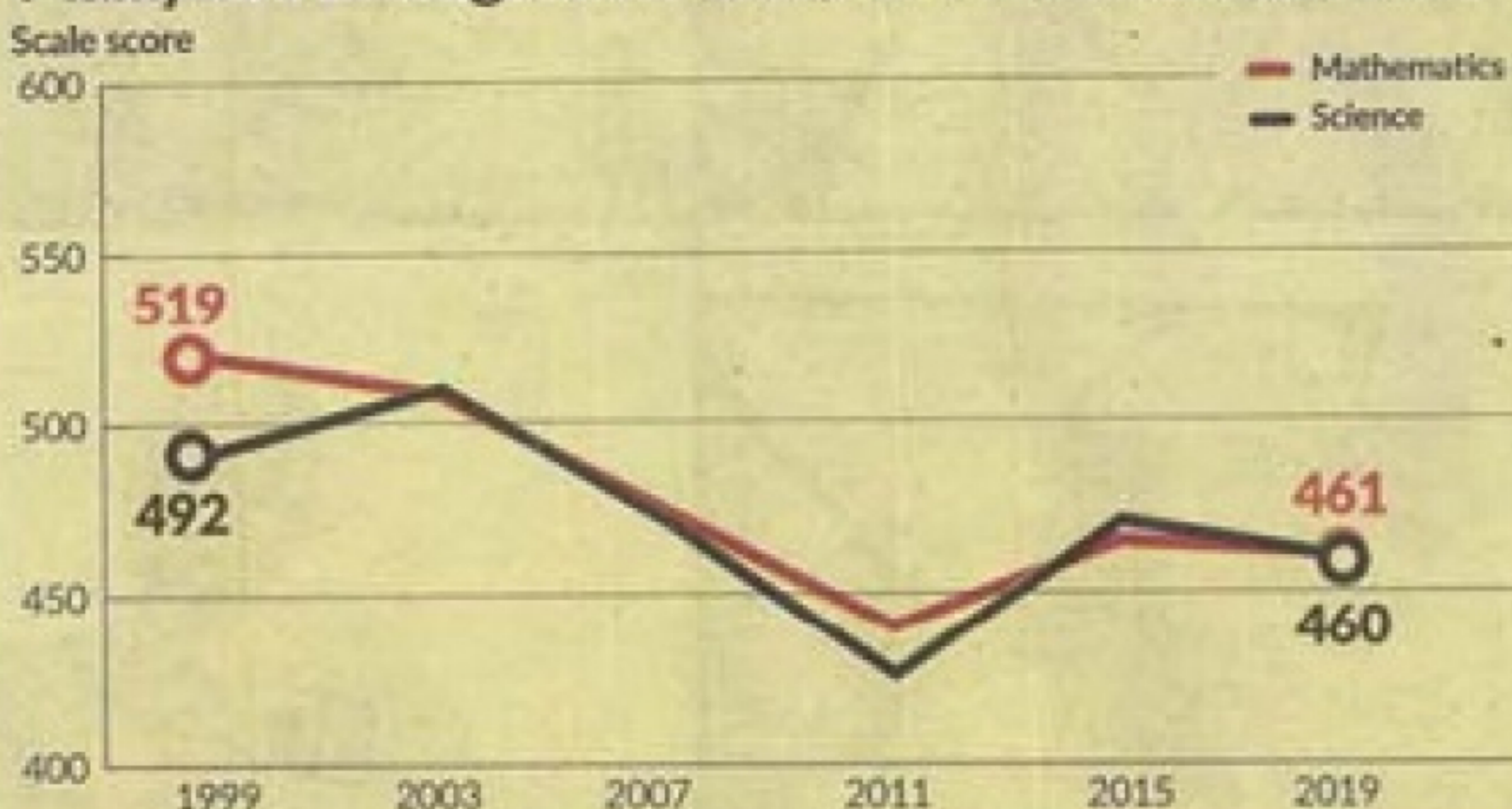
Now that the results are out, Prof Samsilah believes that education stakeholders and researchers are already analysing the findings to suggest the way forward.

"Previously, TIMSS data and findings were used by many countries to update their education curricula and policies, specifically to reflect the growing importance of digital competency and supportive technology for specific curricular goals."

Indeed, the Education Ministry is already at work studying the reports released.

In a recent statement to the media, the ministry said: "The TIMSS 2019 findings will be used as a guide to formulate strategies to improve various ministry programmes and initiatives by taking into

Malaysia's average scale score in TIMSS assessments



International benchmarks

Advanced: 625 points
High: 550 points
Intermediate: 475 points
Low: 400 points

Note: Singapore led in both subjects with an average score of 616 for Mathematics. Trailing behind Singapore were Chinese Taipei, Korea, Japan, and Hong Kong SAR, which continued to outperform all TIMSS countries in Mathematics by a substantial margin. East Asian countries were strong in Science too, but the results were more varied.

Source: International Association for the Evaluation of Educational Achievement (IEA)

TheStar graphics

account the students' achievement at various levels, as well as teacher delivery methods and techniques in the classroom."

Based on the current ranking, National Union of the Teaching Profession secretary-general Harry Tan Huat Hock said it could only be deduced that we are either not improving or that there are "unidentified stumbling blocks" that are preventing us from progressing.

"It is not that we have gone backwards but others have improved by leaps and bounds while we are simply content with our achievements," he said, adding that it is crucial for our education system to be free of politics.

He also pointed out that TIMSS does not clearly reflect the blood, sweat and tears of our dedicated teachers.

He called on the government – especially the ministry – to look into ways to recognise the hard work of more than 400,000 teachers nationwide.

Parent Action Group for Education Malaysia chairman Datin Noor Azimah Abdul Rahim suggested more targeted measures be put in place together with consistent interventions to ensure that our students are always on track.

"Post-Covid-19, we need to introduce broader measures to make up for the lost months of lessons and face-to-face interaction with teachers, especially for Mathematics and Science," she said.

Noting that there were Malaysian students who had achieved advanced individual scores, Noor Azimah said the country's overall performance was average at best.

"Much still needs to be done to achieve our target of becoming among the top third participating countries," she added.

Melaka Action Group for Parents in Education chairman Mak Chee Kin believes teaching the subjects in English is the way forward.

"Students need to be trained to 'think and speak' Science and Mathematics in English, and be able to express themselves better in the language."

He observed that strong resistance to using English as the medium of instruction was only at the primary school level, not in

secondary schools.

"I suggest the government embark on teaching these two subjects in English in secondary schools."

"No time should be wasted. We need to get everything in place such as materials and manpower."

"Do it for the sake of our children and our country," he said, adding that to improve, students must read more.

Teachers, he said, also need to do a lot of preparation to keep their lessons interesting so that students are willing to explore the subjects on their own.

About TIMSS

The Trends in International Mathematics and Science Study (TIMSS) is a large-scale survey to give an international overview on the teaching and learning of Mathematics and Science so that participating countries can make informed decisions about educational policy and practice. TIMSS conducts comprehensive assessments of Mathematics and Science for students in Grade Four and Grade Eight (Year Four and Form Two in the Malaysian context), while taking into account data about country, school, and classroom learning environments. First conducted in 1995, TIMSS reports every four years on the achievements of Year Four and Year Eight, and Malaysia has been participating in this exercise since 1999 by allowing its Form Two students to be assessed by the International Association for the Evaluation of Educational Achievement (IEA), which in turn is directed by the TIMSS International Study Center at Boston College of the United States in collaboration with the network of organisations and representatives from participating countries. In 2015, TIMSS surveyed the education systems across 39 countries, and in the case of Malaysia, the researchers randomly chose 9,726 students from 207 schools.