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EXPERT MASTERCLASS

Re-engineering Teaching Strategies That Work

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Speakers

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Summary Paragraph/Key Points

McKinsey & Company is globally renowned for designing successful pedagogies, from K12 to higher education and professional training. In this Masterclass, Dr. Moore and Ms. Abi Akar explained that beyond some of the qualitative insights gained from interviewing subjects across countries, they have also questioned what data can be leveraged to understand the subject of teaching strategies.

Referencing the worldwide study conducted by the Organisation for Economic Co-operation and Development (OECD), Dr. Moore states that the Programme for International Student Assessment (PISA) is a rich source of data, with insights on students, teachers and strategies.

In summary, the PISA test assesses three subjects (math, science and reading) across 18,000 schools in 72 countries. It comprises data from 140,000 parents, 110,000 teachers and 540,000 students.

McKinsey & Company then leveraged advanced analytics to the dataset to identify drivers of student performance. The research covers more than 100 million data points across the world in the education landscape. Using traditional and advanced analysis techniques, they extracted five core areas of insight, relating to:

1. Student mindsets
2. Teaching practices





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3. Education technology
4. Duration of classroom instruction
5. Early childhood education

In this Masterclass, they selected to focus on two of these insights which Dr. Moore says are “really at the heart of the debate at both the local and the regional level”.

Insight 1: Student mindsets have triple the effect of socioeconomic background on PISA outcomes.

“The importance of understanding mindsets at a qualitative level has been an important topic over the last 10 years,” says Dr. Moore, and shares words from the honorable rulers of the UAE, who are widely quoted as recognizing the impact of the human spirit.

“No matter how many buildings, foundations, schools and hospitals we build, all these are material entities. The real spirit behind the progress is the human spirit, the able man with his intellect and capabilities.” Sheikh Zayed bin Sultan Al Nahyan

“I constantly persuade all to embrace the spirit of persistence in facing challenges as well as faith in fulfilling the hardest mission.” His Highness Sheikh Mohammed bin Rashid Al Maktoum

Several scholars also reference the impact of mindsets on student outcome.

“Grit, curiosity, perseverance, conscientiousness, self-regulation, and optimism...can be taught in the classroom.” Paul Tough, 2012

At the next level, we must look at the different factors: what are the specific mindsets that make a difference? For example, test anxiety matters and a sense of belonging is important.

Dr. Moore claims that “motivation calibration” matters the most, and defines this as follows:

“Motivation is linked to passion to achieve. **Motivation calibration is about knowing what motivated people do in order to achieve so they can calibrate what good motivation looks like.** Students often say that they are motivated, but they cannot explain what this looks or feels like,” explains Dr. Moore.

“Students with good motivation calibration score on average 14% higher than those with poor motivation calibration. Having good motivation calibration is equivalent to leapfrogging to a higher socio-economic set.”

He continues to ask:

“But what type of interventions matter to address mindsets? These are programs that focus on self-regulation strategies, which give students time to reflect and self-score. A sense of belonging is critical to remind students of the things that they value in themselves.”





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Within poor schools, students with low socioeconomic status and high motivation calibration perform better on PISA than students with high socioeconomic status who are poorly calibrated.

“You can read this as a balance. Or you can read it as an acknowledgement that we have a long way to go,” says Dr. Moore.

Insight 2: Students who receive a blend of inquiry-based and teacher-directed instruction have the best outcomes.

“What teaching strategy appears to be the most effective in the classroom?” asks Carine Abi Akar. She recaps the two kinds of instruction that are prevalent in education:

- Teacher-directed instruction, whereby the teacher explains ideas, leads whole class discussions and questions and demonstrates ideas
- Enquiry-based instruction, whereby the student conducts an experiment around a hypothesis, explains and test ideas, debates investigations and draws conclusions for him or herself

McKinsey & Company have examined both methods to assess which is the most effective and have found that a balance exists between the two. Consistent with PISA findings, they have concluded that the more teacher-directed instruction is actually used in the classroom, the better the student outcomes.

However, with enquiry-based instruction, there is an overall negative impact on the performance by students. But this does not mean we abandon the approach.

“No - we blend,” explains Abi Akar. “We find the sweet spot by putting both methods into the classroom experience.”

We see better student outcomes when we start with more teacher facilitation before layering in enquiry-based instruction. This can be divided into three phases:

Phase 1: High teacher facilitation

The teacher explains how ideas can be applied, and explains the relevance of broad science concepts to our lives, before students are given the opportunity to explain ideas.

Phase 2: Medium teacher facilitation

Students draw conclusions from conducting experiments and are required to argue about science questions, before being asked to test ideas.

Phase 3: Low teacher facilitation

The class debate their investigations as a group, design their own experiments and then spend time in a laboratory conducting practical experiments.





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Dr. Moore and Ms. Abi Akar recommend that further reading can be found on the McKinsey & Company website, and note that the organisation is in the process of pulling together more data at “a granular level”.

MAIN TAKEAWAY: In the classroom of tomorrow, students must be encouraged to develop a “motivation mindset”, and teachers should facilitate learning before blending enquiry-based learning techniques into their lessons.

