

## PSLE changes

# New scoring system for Foundation level may dampen motivation

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Updates to the new Primary School Leaving Examination (PSLE) scoring system were recently announced by the Ministry of Education (MOE). One major change involves subjects taught at the Foundation level which caters to academically weaker students who have yet to build strong fundamentals in a subject. About 10 per cent of PSLE pupils take at least one Foundation-level subject.

Under the old PSLE grading system, students are graded on a T-score system, which measures each student's performance relative to that of his peers. This results in precise scores, so that even half a mark in an exam can make a difference in a student's T-score.

The revised grading system puts students on achievement-level (AL) bands, where each student's performance is graded against an absolute standard. At the Standard level, students will be graded from AL 1 to AL 8, with AL 1 indicating the highest performance and AL 8 indicating the lowest.

At the Foundation level, there will be just three wide scoring bands – AL A (75-100 marks), AL B (30-74 marks), and AL C (below 30 marks). The Foundation-level grades of AL A to AL C will be pegged to the Standard-level grades of AL 6 to AL 8 respectively.

Based on my interactions with MOE officials, I believe that MOE has given the benchmarking process much thought so that the concordance between the Standard and Foundation AL scales is appropriate and empirically sound. Hence, I will discuss here instead whether the new grading reforms for Foundation-level students are likely to produce any unintended consequences, so that we may pre-empt and address

them, if necessary.

The move from continuous grading to grading based on only three bands for Foundation students is likely to affect students' incentives to exert effort. Given that the bands are very broad, one concern is that incentives to exert effort may be reduced for some categories of students. For instance, a child who typically scores around 40 marks in his tests, and believes he'll do the same at the PSLE, might feel that it is not really necessary to push himself to do better since whether he scores say 40 marks or say 60 marks, he will get an AL B grade anyway.

We have to remember that the move from continuous grades to banding was motivated by a desire to avoid over-competition among students so that they will not see a need to chase after every mark in order to come out at the top of the cohort. However, when grades are reduced to only a very small number of bands, we are in fact, going to do the very opposite – blunting considerably the

incentives to compete. This will obviously have implications for student motivation, and hence, learning.

While blunting competition among students at the top of the academic distribution may be desirable, (to avoid an arms race of going for the last mark to beat competitors) it may not be as appropriate for the weakest students (that is, students reading subjects at the Foundation level). If anything, we should be trying to foster some competition among them, so that they'll be encouraged to do better.

The new scoring system might also affect students by altering the behaviour of their teachers to focus effort on students near the grade thresholds. For example, it would be easier and less costly for a teacher to try to push a student who typically scores around 60 to 70 marks on his common tests and exams (and who is therefore likely to be at the threshold of the AL B and AL A band) to the next grade band of AL A, than for the teacher

to try to push a student who is far below the threshold (say a student who typically scores 30 to 40 marks on his common tests) to the next grade band.

Teachers may therefore channel more of their time and energy to those students whom they believe will have a higher chance for improvement rather than those that they perceive will have little chance. This was precisely what one study found. Economists Derek Neal and Diane Schanzenbach looked at how the United States' No Child Left Behind (NCLB) policy affected teacher behaviour and student outcomes in the city of Chicago. The NCLB Act, introduced in 2002, created a federal mandate for test-based accountability in every US state. It required schools to engage in standardised testing of mathematics and reading for students from Grades 3 through to 8 (equivalent to Primary 3 through to Secondary 2 in Singapore). Proficiency standards are set so students are either rated as being proficient or not in each subject. In essence, this is akin to having a grading system with two bands – either pass or fail. Schools face the prospect of negative sanctions if they report proficiency levels below the targets set by their respective states.

Interestingly, Professors Neal and Schanzenbach found that the policy induced teachers to shift their attention to those students who were near the proficiency

threshold, at the expense of two groups of students: the weaker students with no realistic chance of becoming proficient in the near term; and stronger pupils who were already proficient in the subject. Their research, titled *Left Behind By Design: Proficiency Counts And Test-Based Accountability*, was published in *The Review of Economics and Statistics* in 2010.

Given the importance of the PSLE and the desire for teachers to produce the best grades possible, it is plausible that some teachers here may similarly engage in such strategic behaviour.

The new grading system is well-intended. It seeks to avoid destructive, excessive competition among students, reduce stress in our education system, and shift the focus towards a genuine love for learning.

As we reform our education system, however, it is useful to anticipate how the changes might affect the incentives faced by students, teachers, and parents, so that we may address any unintended adverse consequences early.

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