The Quality of Education in Indonesia

Daniel Suryadarma
ANU
Let’s start with a test

Think of a fraction that is smaller than $\frac{4}{9}$
How did 8th graders perform?

• Singapore (top performer): 84% correct
• Korea and Japan: 81%
• Australia: 71%
• United States: 69%
• Malaysia: 43%
• South Africa: 30%
• Indonesia: 26%
• Ghana (bottom performer): 21%
Should we be worried?

• Yes.
• Student performance in a standardised test is an indicator of school quality.
• Countries with high quality schools have higher economic growth.
• With growth comes lower poverty, higher support for democracy, and a healthier population.
Outline

I. The quality of education in Indonesia
   • Measured using student performance in the mathematics component of TIMSS

II. Some challenges
   • Curriculum
   • Teacher absence, distribution
   • Teacher qualification
   • School facilities
   • Community participation

III. Efforts to address those challenges

See the book
TIMSS 2007

- Tests mathematics and science aptitude of 4th and 8th grade students in 50 countries and 7 states in Spain, Canada, US, UAE.
- Indonesia participated since 1999, only 8th grade.
  - In 2007, about 4000 students participated.
  - Indonesia’s peers based on economic and health conditions: Iran, Jordan, Romania, Tunisia.
- Grading: mean 500, standard deviation 100.
- Benchmark scores:
  - 550 (High): students can apply their understanding and knowledge in a variety of relatively complex situations.
  - 400 (Low): students have some knowledge of whole numbers and decimals, operations, and basic graphs.
Indonesia’s Performance in TIMSS (1)

Figure 1. TIMSS 1999 - 2007

- Average comparable countries
- Indonesia
- Average Malaysia, Singapore, Thailand
Indonesia’s Performance in TIMSS (2)

**Figure 2. Benchmark Attainment (%)**

- **Attaining 550**
- **Not attaining 400**

- **Average Malaysia, Singapore, Thailand**
- **Average comparable countries**
- **Indonesia**

![Bar chart showing benchmark attainment (%) for different countries.](chart.png)
What Factors Affect School Quality?
Curriculum: Instructional Hours and Content (1)

Figure 4. School Instructional Hours

- Average Malaysia, Singapore, Thailand
- Average comparable countries
- Indonesia

Instructional hours per week (hours)

Share spent on math per week (%)

Math instruction per month (hours)
Curriculum: Instructional Hours and Content (2)

Figure 5. Mathematics Content in School

- **Average Malaysia, Singapore, Thailand**
- **Average comparable countries**
- **Indonesia**

- **Taught to all students**
- **Not taught**
- **Only taught to more able students**

Number

0  10  20  30  40
Teacher Absence

- 19%
  - Excludes anticipated absences.
  - Higher than Bangladesh, Ecuador, Peru.

- Suryadarma et al (06): Teacher absence has a significant and negative relationship with mathematics performance.
Class Size and Teacher Distribution (1)

Figure 7. Student-Teacher Ratio, 2008

Indonesia
Class Size and Teacher Distribution (2)

- Suryadarma et al (06): The ideal class size for primary schools in Indonesia is 25.

![Figure 8. Class Size and TIMSS 2007 Score, Indonesia](image)
Class size and teacher distribution (3)

• The issue in Indonesia is not class size/student-teacher ratio.
• It is an imbalance in teacher distribution.
  – Related to teacher absence.
• del Granado et al (07)
  – Urban areas: 68% of schools have too many teachers; 21% have too few.
  – Remote areas: 17% of school have too many teachers; 66% of schools have too few.
I’m probably out of time by now

• School quality in Indonesia is low compared to its neighbours and other comparable countries.
• There are issues related to the curriculum, at least for mathematics.
• Teacher absence remains a difficult issue to deal with.
• Student-teacher ratio is already low.
• But there is a staggering imbalance in teacher distribution.
• Please read the book for more details (or email me).