



# classroomassessment

| yeap ban har

marshall cavendish institute singapore

e-mail | [banhar.yeap@pathlight.org.sg](mailto:banhar.yeap@pathlight.org.sg)

blog | [www.banhar.blogspot.com](http://www.banhar.blogspot.com)

---

**4<sup>th</sup> READ Global Conference**  
***“Measuring for Success”***  
**St. Petersburg, Russian Federation**  
**Technical Workshop on Classroom Assessment**  
**May 15-16, 2014**

The 4th READ Global Conference will take place from May 12-16 at the Corinthia Hotel in St. Petersburg, Russia. Participants at the 2014 conference will include delegates from the eight countries receiving support under the READ Trust Fund program, Russian policymakers and experts, World Bank staff, and international experts in the areas of assessment and learning. The main conference proceedings will take place from May 12-14. The remainder of the week (May 15-16) will be devoted to technical training workshops for the READ country teams.

**Workshop Dates**

The workshop on classroom assessment will take place after the main conference proceedings and will run for two full days, from 9:00 am to 5:00 pm on May 15-16, 2014.

**Workshop Objectives**

The workshop will address best practices in classroom assessment and formative assessment techniques, and how to train teachers in these practices.

By the end of the workshop, participants should be able to:

- understand the importance of classroom assessment
- identify key elements to take into account in classroom assessment projects/reforms
- evaluate classroom assessment interventions
- design classroom assessment interventions (including pre-service and in-service teacher training) that are relevant to their country contexts.

Workshop Outline	
<b>0900 – 1030</b>  Day 1 Session 1	<i>Being on the Same Page</i>   Overview of Assessment The purpose of this session is to review concepts in assessment and to situate classroom assessment within the broader picture of international assessment and national assessment.  Assessment in the context of professional learning communities will be discussed.  Key Question   How does assessment contribute to high achievement?
<b>1030 – 1045</b>	<i>Break</i>
<b>1045 – 1230</b>  Day 1 Session 2	<i>Seeing is Believing</i>   Experiencing Classroom Assessment The purpose of this session is to show how assessment and instruction are intertwined. The concept of assessment as learning is the main focus of this session.  Key Questions   What is assessment as learning? How can we make this happen in more classrooms more often?
<b>1230 – 1330</b>	<i>Lunch</i>
<b>1330 – 1700</b>  Day 1 Session 3  includes <b>1515 – 1530</b> <i>Break</i>	<i>Not Reinventing the Wheel</i>   Harnessing Existing Practices The purpose of this session is to re-look at common instructional practices and how teachers can be helped to use them. Participants will have opportunities to take stock of what is common in their respective countries and the facilitator will suggest ways these can be harnessed to yield assessment data.  Key Question    What common instructional practices can be used for classroom assessment?

Workshop Outline	
0900 – 1030  Day 2 Session 1	<p><i>Tools of the Trade</i>   Assessment Tools</p> <p>The participants will have opportunities to experience a few examples of assessment tools and to explore the types of assessment data that they can generate.</p> <p>Key Questions  </p> <p>What type of assessment data can be obtained by a teacher on a regular basis to inform instruction? What are the tools available to do this?</p>
1030 – 1045	<i>Break</i>
1045 – 1230  Day 2 Session 2	<p><i>Piecing Them Together</i>   Process of Classroom Assessment</p> <p>The purpose of this session is to look at the entire process of selection of assessment tools, using them and collecting assessment data, as well as interpreting the data and planning the next instructional plan.</p> <p>Key Questions  </p> <p>What are the stages in the process of classroom assessment? How do our teachers fare in each of them? Are they ready? What else do they need?</p>
1230 – 1330	<i>Lunch</i>
1330 – 1515  Day 2 Session 3	<p><i>Making It Happen</i>   Success Factors</p> <p>This session studies how educational systems make classroom assessment happen and happen at a high level.</p> <p>Key Questions  </p> <p>What are conditions necessary for classroom assessment to happen in schools? What are the critical success factors?</p>
1515 – 1530	<i>Break</i>
1530 – 1700  Day 2 Session 4	<p><i>Putting Our Heads Together</i>   Forum</p> <p>This concluding session is an opportunity to synthesize the learning over the last few sessions.</p>

	<p>Key Questions  </p> <p>What are the things we can do straight away in our system?</p> <p>What are some things that will take a while to implement?</p> <p>What is our long-term vision of classroom assessment?</p>
--	--

These topics will be weaved into the discussion.

- Why classroom assessment is important?  
Evidence linking classroom assessment with student performance.
- Issues in classroom assessment: Typical problems encountered in classroom assessment practices (e.g., poor quality assessments, focus on lower order cognitive skills, poor feedback to students).
- Best practices in classroom assessment: Country examples (e.g., Scotland, Finland, Singapore).
- How classroom assessment relates to other components of the school system: learning standards and the curriculum, teacher training, supervision, Education Management Information System (EMIS).
- How to ensure the quality of classroom assessment practices: quality assurance mechanisms (e.g., supervision, moderation);
- How to introduce reforms in classroom assessments: improving alignment with learning standards, the curriculum, and textbooks, improving teacher training programs, supervision.
- Uses of classroom assessment information: uses for improving teaching and learning, scoring/grading student work, administrative/bureaucratic uses, students' report cards, EMIS.
- Design, implementation, reporting and uses in classroom assessment projects.

## case study

In 1980, only 58 percent of first-grade students completed secondary school. By 2000, 93 percent of first-grade students completed secondary school. Achievement, as measured by national examination, also improved. In 1981, 40 percent of the first-graders would graduate 10th grade with passes in three subjects. In 1991, the proportion increased to 65 percent. In 2010, the proportion was 88 percent. Providing students with differentiated curriculum and differentiated examination has arguably resulted in “a very low attrition rate and a very high average achievement.”

| Yeap 2012

Improving the Education for All: Curriculum Development and Implementation in  
Singapore  
American Institutes for Research

In the first national examination conducted in 1960, a total of 30,615 students sat for the Primary School Leaving Examination (PSLE) and 45 percent of them passed. In 2011, a total of 45,261 students sat for the high-stakes examination and 97 percent passed. Only 2.6 percent did not meet the proficiency required for secondary schooling. Since the 1990s, Singapore has always done well in various international studies in literacy, science, and mathematics. It is always among the top-performing countries in Progress in International Reading Literacy Study (PIRLS), Trends in International Mathematics and Science Study (TIMSS), and Program for International Student Assessment (PISA). More important than the ranking is that about 12 percent of 15-year-old students in Singapore were performing at a high level in reading, mathematics, and science in PISA 2009. This compares well with the Organization of Economic Cooperation and Development (OECD) average, which was 4 percent. High-performing OECD economies such as New Zealand, Finland, Japan, and Australia had between 8 percent and 10 percent of students reaching the same level. In Shanghai, it was almost 15 percent. The proportion of students who reach the highest levels was about 15 percent in reading (almost 20 percent in Shanghai with the OECD average at 8 percent); about 35 percent in mathematics (50 percent in Shanghai with the OECD average at 13 percent); and 20 percent in science (almost 25 percent in Shanghai with the OECD at being 9 percent). Similarly, in TIMSS, the proportion of students who reached

the advanced international benchmark has been consistently high. In TIMSS 2007, 36 percent of Grade 4 and 32 percent of Grade 8 students reached this level in science (international median were 7 percent and 3 percent, respectively), and 41 percent of Grade 4 and 40 percent of Grade 8 students reached this level in mathematics (international median was 5 percent and 2 percent, respectively). These results were in great contrast to Singapore's rank of 16th out of 26 participating countries in the Second International Science Study in 1982.

| Yeap 2012  
Improving the Education for All: Curriculum Development and Implementation in  
Singapore  
American Institutes for Research

Since the pilot testing of a theory-driven approach to mathematics teaching and learning and an adoption of a problem-solving curriculum in 1992, Singapore's students' performance in mathematics have been consistently high. Assessment has played an important role in this.

This is a summary of key reforms that had taken place. Its impact at classroom level will be discussed during the workshop.

- |      |  |
|------|--|
| 1980 | CDIS was set up to research to ways to better teach mathematics. As a result, a new set of textbooks Primary Mathematics was pilot tested and used in all Singapore primary schools. |
| 1992 | Problem-solving curriculum framework was introduced, starting with Primary 1 and Secondary 1.  |
| 1997 | Thinking Schools, Learning Nation was introduced to the education system.  |
| 2001 | Publishers were invited to submit textbooks for use in primary schools.  |
| 2004 | Teach Less, Learn More was introduced to facilitate the achievement of the vision outlined by TSLN.  |

2012 Student-Centred, Values-Driven was introduced to refine the vision of TSLN and TLLM.

Singapore students have since performed well, consistently, on international benchmarking studies. Considering that it used to be part of Malaysia before 1965, Singapore's current performance is a testimony that a system can influence its students' learning outcomes.

<b>Mathematics</b>	<b>Mean</b>	<b>% High Performers</b>	<b>% Low Performers</b>
Highest	613	55.4	3.8
Singapore	573	40.0	8.3
Malaysia	421	1.3	51.8
OECD Average	494	12.6	23.1

| PISA 2012

<b>Creative Problem Solving</b>	<b>Mean</b>	<b>% High Performers</b>	<b>% Low Performers</b>
Highest	562	29.3	8.0
Singapore	562	29.3	8.0
Malaysia	422	0.9	50.5
OECD Average	500	11.4	21.4

| PISA 2012

# definition

Various definitions of assessment and the role it plays in teaching and learning:

- Assessment involves the **use of empirical data on student learning to refine programs and improve student learning**. (Assessing Academic Programs in Higher Education by Allen 2004)
- Assessment is the process of gathering and discussing information from **multiple and diverse sources** in order to develop a deep understanding of **what students know, understand, and can do with their knowledge** as a result of their educational experiences; the process culminates when assessment results are used to **improve subsequent learning**. (Learner-Centered Assessment on College Campuses: shifting the focus from teaching to learning by Huba and Freed 2000)
- Assessment is the systematic basis for making inferences about the learning and development of students. It is the **process of defining, selecting, designing, collecting, analyzing, interpreting, and using information to increase students' learning and development**. (Assessing Student Learning and Development: A Guide to the Principles, Goals, and Methods of Determining College Outcomes by Erwin 1991)
- Assessment is the systematic **collection, review, and use of information** about educational programs undertaken for the purpose **of improving student learning and development**. (Assessment Essentials: planning, implementing, and improving assessment in higher education by Palomba and Banta 1999)

Source | <http://www.assessment.uconn.edu/what/index.html>

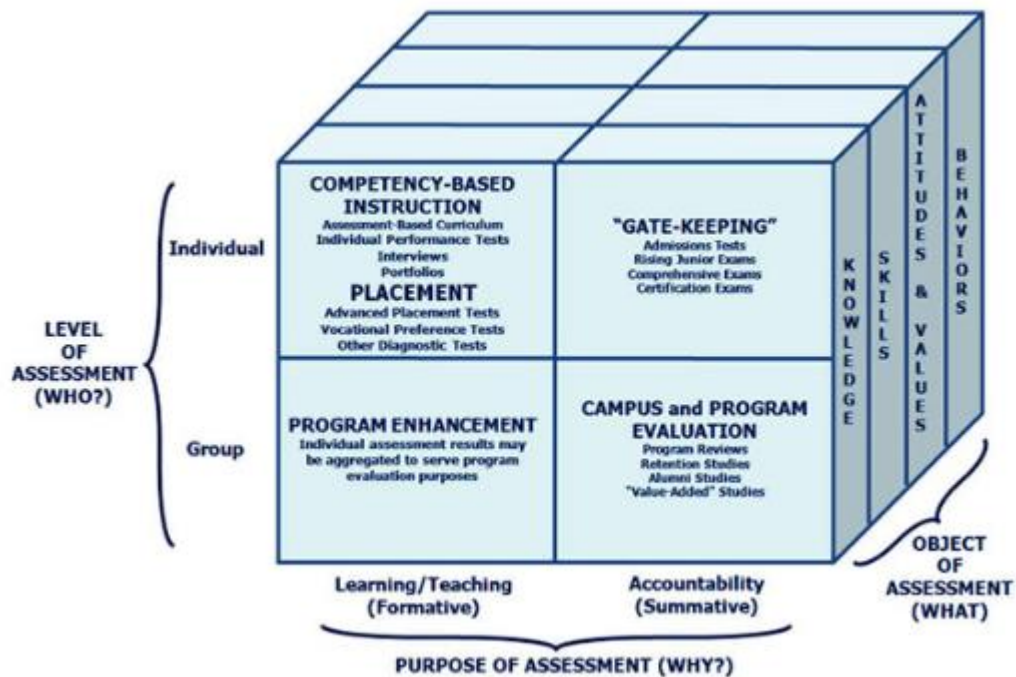
---

---

---

---

Notes



Source | Terenzini, P. T. 1989

# criticalquestions

- What is it that we want students to learn?
- How do we know they have learnt it?
- What if they have difficulties learning it?
- What if they already learnt it?

Source | DuFour 2004

These are the four critical questions that drive professional learning communities (PLC's).

experiencing

# classroom assessment

Cut the square into four equal parts.

How do you know they are equal?



mathematics



connecting

# classroom assessment

## to the bigger picture

How classroom assessment relates to other components of the school system

### System Level

- The lesson **4 Equal Parts** is based on a **learning standard** determined by Ministry of Education Singapore.
- This lesson is also found in curriculum materials i.e. **school textbooks** approved by Ministry of Education which requires certain learning theories to be used in the framework to write the textbook. In particular, in the case of mathematics textbooks, Bruner's theory of concrete and pictorial representations of abstract ideas must be used.
- DuFour's four critical questions were introduced to schools in 2009 and school-wide implementation was expected in all schools by 2012 as part of having professional learning communities in every school.



# systemlevel

- The lesson 4 Equal Parts is based on a **learning standard** determined by Ministry of Education Singapore.
- This lesson is also found in curriculum materials i.e. **school textbooks** approved by Ministry of Education which requires certain learning theories to be used in the framework to write the textbook. In particular, in the case of mathematics textbooks, Bruner's theory of concrete and pictorial representations of abstract ideas must be used.
- Do **initial teacher preparation** at teacher colleges and universities prepare teachers in classroom assessment process?
- Do **professional learning** opportunities available to teachers in refining, or learning about (if this is absent in initial teacher preparation programs), classroom assessment practices?
- Does **teacher assessment** place an important emphasis on classroom assessment?

## examples of tools

# classroom assessment

- Tasks
  - Differentiated Practice Tasks
- Physical Tools
  - Mini Boards
  - Coloured Cards
  - Journal
- Research-Based Frameworks
  - Bruner
    - Concrete
    - Pictorial
    - Symbolic
  - Newman
    - Read
    - Comprehend
    - Knowledge of Strategies
    - Transform
    - Compute
    - Interpret