

# **SESSION 4**

## **Assessing**

# **Higher Order Thinking Skills**

**READ Regional Workshop**

**Astana, Kazakhstan**

**September 19, 2012**

# READ country presentation

# Assessing Higher Order Thinking Skills

## Session objectives

Participants will:

- analyze the types of thinking skills measured in a variety of assessment questions
- be able to make informed decisions about measuring thinking skills in student assessments

# Why are higher order thinking skills (HOTS) important?

# Why are HOTS important?

- Required to work in global economy
- Required to participate in a democracy
- Increased focus of international assessments
  
- Countries are introducing reforms
  - to ensure students learn HOTS
  - to include HOTS in their curriculum and assessments

# What exactly are HOTS?

# Thinking Skills Matrix

Skill	Description of what students can do
Lower Order Thinking Skills	<b>Remembering:</b> Retrieving, recalling, or recognizing knowledge from memory <b>Understanding:</b> Constructing meaning, interpreting, exemplifying
Higher Order Thinking Skills (HOTS)	<b>Applying:</b> Use information or methods in new situations to solve problems <b>Analyzing:</b> Identify components, see patterns, compare, classify <b>Evaluating:</b> Judge, decide, recommend <b>Creating:</b> Put parts together in a new way or synthesize parts into something new . Design.

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“Newer” Higher Order Thinking Skills	<b>Critical thinking and problem solving:</b> Solve problems, use systems thinking, reason effectively (inductive/deductive) <b>Creativity and innovation:</b> Create new and worthwhile ideas, implement innovations <b>Communication and collaboration:</b> Communicate clearly and effectively

# Activity 1

## Table discussion

At your table, discuss:

1. Are HOTS an important topic in your country?
2. What has been done in your country to ensure that students learn HOTS?
3. Are HOTS measured in classroom assessment activities in your country?

# Activity 2

## Analyze assessment questions

- In pairs, analyze the questions provided in the sheet using **Thinking Skills Matrix A or B**
  - Identify the skills measured by each question on the sheet
- At your table, discuss
  - What skills are measured by each question?
  - Do you agree on how you classified the questions? Try to reach a consensus.
- Share with the room
  - The skills measured by each question and the issues you faced while identifying the skills

# Activity 3

## Table discussion

1. What kinds of questions are typically used to assess students in your country?
2. What kinds of questions would be most difficult to students in your country?
3. Would it be appropriate to have a test with only HOTS in your country?
4. Can HOTS be measured with multiple-choice questions?
5. What changes (beyond assessment reform) need to occur in your education system to ensure that students learn HOTS?

# Key lessons

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- HOTS
  - are important for personal, social and economic development
  - can be analyzed using different conceptual frameworks
  - can be measured using a variety of formats or tasks
  - need to be introduced in coordination with other units or programs in the education system (e.g., curriculum, teacher training)

# Assessment in the broader context

