

# Session 2

## SDG 4 Strategies and Methodologies for Learning and Skills Indicators

Hamburg, Germany

October 17-18, 2018

# Indicator 4.1.1



Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex

<b>09:45-17:00</b>	<b>2. SDG 4 strategies and methodologies for Learning and Skills indicators</b>	
09:45-10:30	Opening Remarks by the Task Force 4.1 Chair Methodological development and progress of indicator 4.1.1	Marguerite Clarke/WBG GAML Secretariat
<b>10:30-10:45</b>	<i>Tea/Coffee Break</i>	
10:45-11:15	Discussions, Q & A	Moderator: Marguerite Clarke/WBG
11:15-12:15	Presentation on issues, challenges and needs of the Member States in implementing assessments	Presenters: Countries and organizations
<b>12:15-13:30</b>	<i>Lunch</i>	
13:30-14:45	Presentation on issues, challenges and needs of the Member States in implementing assessments	same
<b>14:45-15:15</b>	<i>Tea/Coffee Break</i>	
15:15-16:15	Presentation on issues, challenges and needs of the Member States in implementing assessments	same
16:15-17:00	Discussions, Q & A	

# Expected Outcomes

- ACKNOWLEDGE the Global Content Framework for Reference for reading and mathematics
- REVIEW and **ENDORSE** the content alignment tool and the procedural alignment tool
- **ADOPT** the minimum proficiency level of reading and mathematics for the 3 levels of education
- REVIEW AND **AGREE** on the alternative alignment methodology for indicators 4.1.1.

# Content Alignment Tools

- The tool allows, in a simplified way, to map learning assessment frameworks against the Global Content Framework (GCF).
- The tool includes:
  - A content alignment questionnaire using the GCF as a reference point
  - Defined preliminary criteria about minimum alignment to help countries evaluate whether their learning assessments have met minimum content coverage sufficient for reporting
  - A tool to map and assess the level of alignment (coverage) of national assessment frameworks to the GCF
- Content alignment questionnaire on an online platform

# Content Alignment Tools on an online platform

- A platform that would generate a database on countries' alignment to GCF
  - The multilingual website would display geographic heat-map and charts.
  - It invites users to complete an online survey designed to capture a learning assessment's content coverage with reference to the 4.1.1 Global Content Framework.
  - This database will allow comparison of a given country against another country, in a region or around the world.
  - Respondents will enter data via a series of questions that form a dialogue between the respondent and the UIS platform.
  - The respondent's answers will be stored in a database
  - When the questionnaire is completed, the system should provide to the user a scorecard that measures the level of compliance of the national learning assessment against the global content framework in reading and/or mathematics.

# Scoring Criteria used for Mathematics

- **Sufficient coverage:**

50% or greater of the grade-level appropriate constructs in 4 of the 5 content\* domains (\*see below)

AND

75% or greater of the grade-level appropriate constructs in the 5 content domains

- **Nearing sufficient coverage:**

50% or greater of the grade-level appropriate constructs in 3 of the 5 content domains

AND

50% or greater of the grade-level appropriate constructs in the 5 content domains

- **Insufficient coverage:**

Less than 50% of the grade-level appropriate constructs in 3 or more of the 5 content domains

OR

Less than 50% of the grade-level appropriate constructs in the 5 content domains

- \*The Global Framework content domains are: Number Knowledge; Measurement; Statistics; Geometry; Algebra. The Global Framework also contains the cognitive domain Math Proficiency, which is *not* a part of determining sufficiency of content coverage.

# Scoring Criteria used for Reading

- **Sufficient coverage:**

50% or greater of the appropriate constructs in 2 of the 3 content\* domains (\*see below)

AND

75% or greater of the appropriate constructs in the 3 content domains

- **Nearing sufficient coverage:**

50% or greater of the appropriate constructs in 2 of the 3 content domains

AND

50% or greater of the appropriate constructs in the 3 content domains

- **Insufficient coverage:**

Less than 50% of the appropriate constructs in 2 or more of the 3 content domains

OR

Less than 50% of the appropriate constructs in the 3 content domains

- \*The Global Framework content domains are: Reading competency; Linguistic competency; and Metalinguistic competency.



# REVIEW and **ENDORSE** the content alignment tool

Your name (please print): \_\_\_\_\_

Name of your organization: \_\_\_\_\_

GAML5/4.1.1/1  
Pages 10-11 of  
Decision Booklet

1.	Do you agree with the process of the content alignment, using the respective Mathematics and Reading Global Content Framework as reference?	YES	NO
2.	Do you agree with the scoring criteria use for:		
a.	Mathematics?	YES	NO
b.	Reading?	YES	NO
3.	Do you agree that the same scoring criteria should be used for each education level for :		
a.	Mathematics?	YES	NO
b.	Reading?	YES	NO

# Procedure Alignment Tools

A few questions in each of the 12 Areas (from GP-LA) are developed:

- 1. Assessment Team Responsible for Implementing the Learning Assessment**
- 2. Technical Standards to Guide Assessment activities**
- 3. Assessment Framework**
- 4. Development of Items**
- 5. Linguistic Quality Control**
- 6. Designing Cognitive Instruments**
- 7. Sampling**
- 8. Standardized Operational Administration of Assessments**
- 9. Managing Data**
- 10. Equating Scores**
- 11. Analyses of Assessment Data**
- 12. Reporting and Using Results**

# Scoring rule categorizes in 5 groups – Procedural Alignment Tool

	Procedural Questionnaire Category	Num. Quest.	Grouping Name	Max. Score	Sufficient Score
1.	Assessment Team Capacity	2	Capacity and Technical Standards	4	3 or more
2.	Technical Standards	2			
3.	Assessment Framework	1	Instrument Development	4	3 or more
4.	Development of Items	2			
5.	Designing Cognitive Instruments	1			
6.	Linguist Controls	1 or 3	Linguistic Control <sup>a, b</sup>	1 or 3	No criterion for unsatisfactory; just report the score
7.	Sampling	4 or 6	Sampling <sup>a</sup>	4 or 6	4 or more
8.	Standardized Operations	3	Data Control, Analysis, and Reporting	13	7 or more
9.	Managing Data	2			
10.	Equating Scores	2			
11.	Analyses of Assessment Data	4			
12.	Reporting and Using results	2			
	Maximum points	26 or 30	Maximum points excluding Linguistic control	25 or 27	

<sup>a</sup> Not all countries will answer every question in the Linguistic Control and Sampling groupings. For example, if a country's NLA is a census assessment instead of a sampling assessment, it will have fewer questions to answer.

<sup>b</sup> Not every country will have a translated version of its NLA. Thus, the questionnaire asks questions about translations but the scoring of this category is not used for determining sufficiency.

# REVIEW and **ENDORSE** the procedural alignment tool

Your name (please print): \_\_\_\_\_

Name of your organization: \_\_\_\_\_

GAML5/4.1.1/2  
Pages 12-13 of  
Decision Booklet

1.	Do you agree with the process of the procedure alignment, using the good practices for learning assessment (GP-LA) as reference?	YES	NO
2.	Do you agree with the 5 major groupings of the procedure as main criteria for procedural alignment?	YES	NO
3.	Do you agree with the scoring rule/criteria use for procedure alignment?	YES	NO

# Proficiency Scale and Minimum Proficiency Level

- Present UIS Process for creating proficiency scale for existing assessments
- Use input from UIS assessment partners
- Use their Performance Level Descriptors (PLDs)
- Analyze test objectives and items
- Generate Minimum Proficiency Level Descriptors
- Allow different tests that may be used to report achievement of minimum proficiency

# ADOPT the minimum proficiency level of reading and mathematics for the 3 levels of education

Your country (please print): \_\_\_\_\_

Your name (please print): \_\_\_\_\_

Name of your organization: \_\_\_\_\_

## A. One of the UIS Goals is:

In order to report on the three education levels [*in Grade 2 or 3 (4.1.1a), at the end of primary education (4.1.1b), and at the end of lower secondary education (4.1.1c)*] in two subject areas (Reading and Mathematics) as specified in indicator 4.1.1, there is a need to define performance or skills needed to achieve proficiency.

**Do you agree** that defining a *proficiency scale* based on the PLDs of different tests is a useful way for UIS to identify skills and abilities needed to achieve proficiency in order to report on the three education levels?

	Strongly disagree	Disagree	Agree	Strongly agree
(1) In Mathematics?				
(2) In Reading?				

## B. Another UIS goal is:

To support the use of existing national assessments and cross-national assessments to facilitate measurement and reporting for learning outcomes.

**Do you agree that** the processes and the outputs presented are a useful way for UIS to support the use of existing regional assessments and cross-national assessments for *reporting student learning outcomes* on the three education levels?

	Strongly disagree	Disagree	Agree	Strongly agree
(3) In Mathematics?				
(4) In Reading?				

## C. Minimum Proficiency Level:

**Do you agree that** the *minimum proficiency levels* presented for the three educational levels are appropriate for UIS to use in helping countries to report progress on SDG 4.1.1?

	Strongly disagree	Disagree	Agree	Strongly agree
(5) In Mathematics?				
(6) In Reading?				

D. We would appreciate any comments that you wish to make:

# Linking methodologies and options

- Non-statistical approach
  - Strategy 1 - Policy-linking: pedagogically informed recalibration of existing data
- Statistical approach
  - Strategy 2a - Item-based linking: psychometrically informed recalibration based on common items
  - Strategy 2b - Test-based linking: recalibration based on running parallel test on representative sample of respondents
  - Strategy 2c - Statistical alignment: recalibration of existing data using countries who participated in more than one cross-national assessments

# REVIEW and **AGREE** on the alternative alignment methodology for Indicator 4.1.1

Your name (please print): \_\_\_\_\_

Name of your organization: \_\_\_\_\_

1.	Do you agree to use statistical and non-statistical approaches in linking learning assessments?	YES	NO
2.	Do you agree with strategy 1 - The non-statistical approach: pedagogically informed recalibration of existing data (or policy linking), as an option for linking in		
a.	Grade 2/3?	YES	NO
b.	End of Primary?	YES	NO
c.	End of Lower Secondary?	YES	NO
3.	Do you agree with strategy 2a - The statistical approach: Psychometrically informed recalibration based on common items (or item-based approach), as an option for linking in		
a.	Grade 2/3?	YES	NO
b.	End of Primary?	YES	NO
c.	End of Lower Secondary?	YES	NO

4.	Do you agree with strategy 2b - The statistical approach: Recalibration by running a parallel test on a representative sample of students (or test-based approach), as an option for linking in		
a.	Grade 2/3?	YES	NO
b.	End of Primary?	YES	NO
c.	End of Lower Secondary?	YES	NO
5.	Do you agree with strategy 2c - The statistical approach: Recalibration of existing data, as an option to validate the data?	YES	NO
6.	On a national level, do you agree that you can use different approaches to report on different education levels? For example, Country X can use social moderation (policy linking) to report on Grade 2/3 for Indicator 4.1.1, but the test-based approach to report on End of Primary for Indicator 4.1.1.	YES	NO
7.	On an international scale, do you agree that countries can use any approach to report on an education level? For instance, Country X can use social moderation (policy linking) and Country Y can use test-based approach to report their data on End of Primary for Indicator 4.1.1.	YES	NO



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# Expected Outcomes

- ACKNOWLEDGE countries' reporting strategies and RECOGNIZE the challenges
- PREPARE recommendations to the TCG and ED 2030 SC regarding capacity development needs

# ACKNOWLEDGE countries' reporting strategies and RECOGNIZE the challenges

## Presentations

- Chile
- Burundi
- Dominican Republic
- Grenada
- India
- Indonesia
- Maldives
- Mali
- St Vincent and the Grenadines
- Tunisia

# PREPARE recommendations to the TCG and ED 2030 SC regarding capacity development needs

1. ....
2. ....
3. ....