International Standard Setting Exercise

Presentation outline

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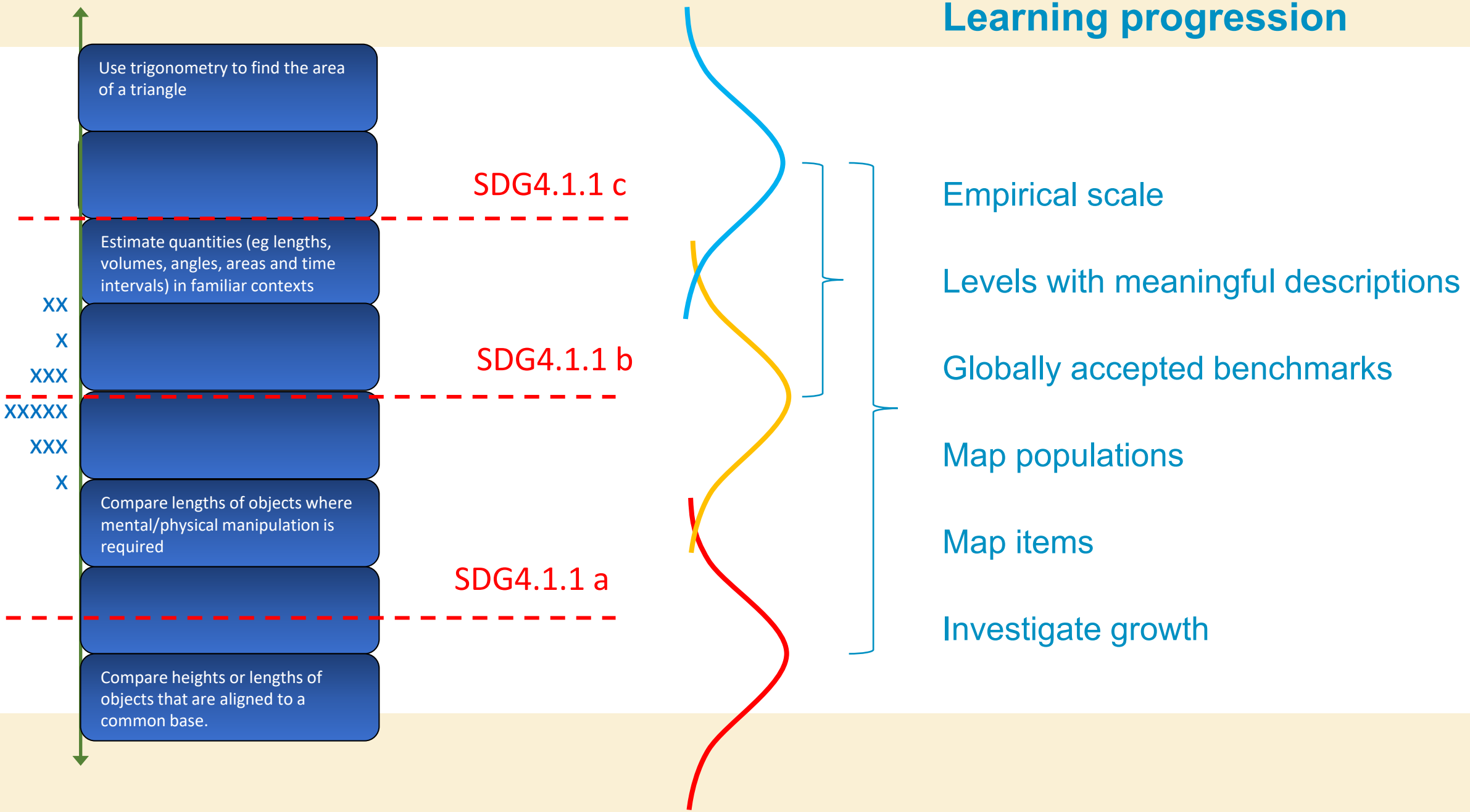
Global Education Monitoring Centre

Australian Government
Department of Foreign Affairs and Trade

ACER
Australian Council *for* Educational Research

Global Alliance for Monitoring learning 23 November 2022, Maurice Walker, Goran Lazendic

Learning progression



SDG 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

Updates to MPL

Main changes to the Minimum Proficiency Levels Unpacked document since 2020 (GAML 7)

- Revised and extended sample items for the Reading MPLs
- A summary description of changes to the MPLs from 2018 to 2022
- Statement on alignment between the SDG 4.1.1 MPLs and the Global Proficiency Framework
  - Domains and constructs (main structural features) are well aligned for both mathematics and reading

MPLs unpacked	MPL / GPF alignment closest to:
End of lower primary (SDG 4.1.1a)	Grade 2
End of primary (SDG 4 1.1b)	Grade 5
End of lower secondary (SDG 4.1.1c)	Grade 8

ISSE rationale

To further develop approaches to
harmonise quantitative data across assessment programs,
and to provide substantive information about
children's learning levels and progress
benchmarked against international standards.

ISSE goal

The goal of the International Standard Setting Exercise (ISSE) was to place thresholds on empirical reading and mathematics Learning Progression Scales for:

- The Minimum Proficiency Level at the end of lower primary education
- The Minimum Proficiency Level at the end of primary education
- The Minimum Proficiency Level at the end of lower secondary education

Participants

Participant requirements

Expert or master teachers of reading or mathematics

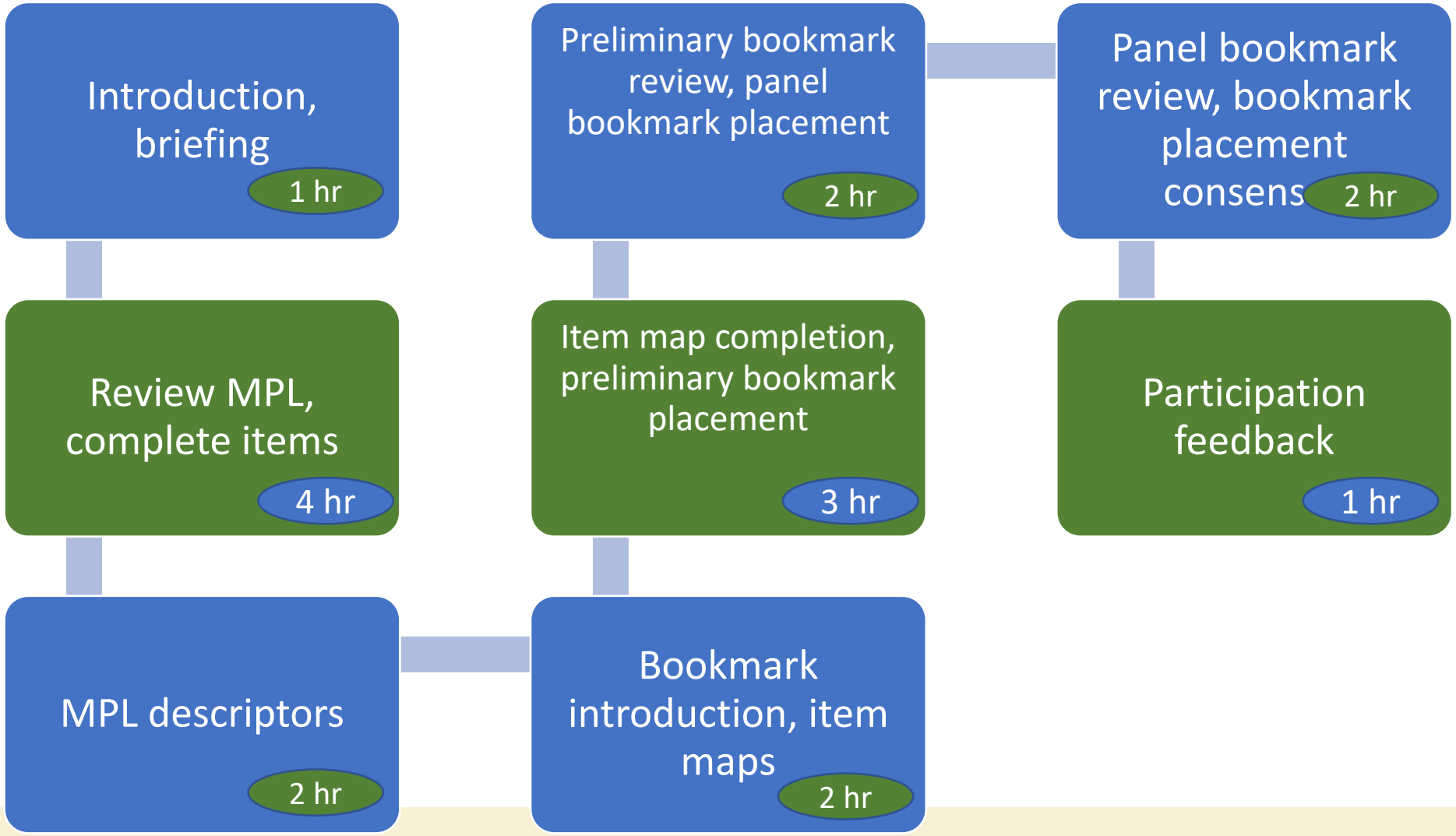
Reading or mathematics subject matter experts, with experience in one of: assessment development, curriculum development, or pedagogical training.

Gender	Mathematics	Reading
Female	18	24
Male	11	7
Total	**29**	**31**

Region	Mathematics	Reading
Africa	10	15
Asia	2	4
Europe	*0*	6
Oceania	14	*8*
Americas	*3*	*5*
Total	**31**	**38**

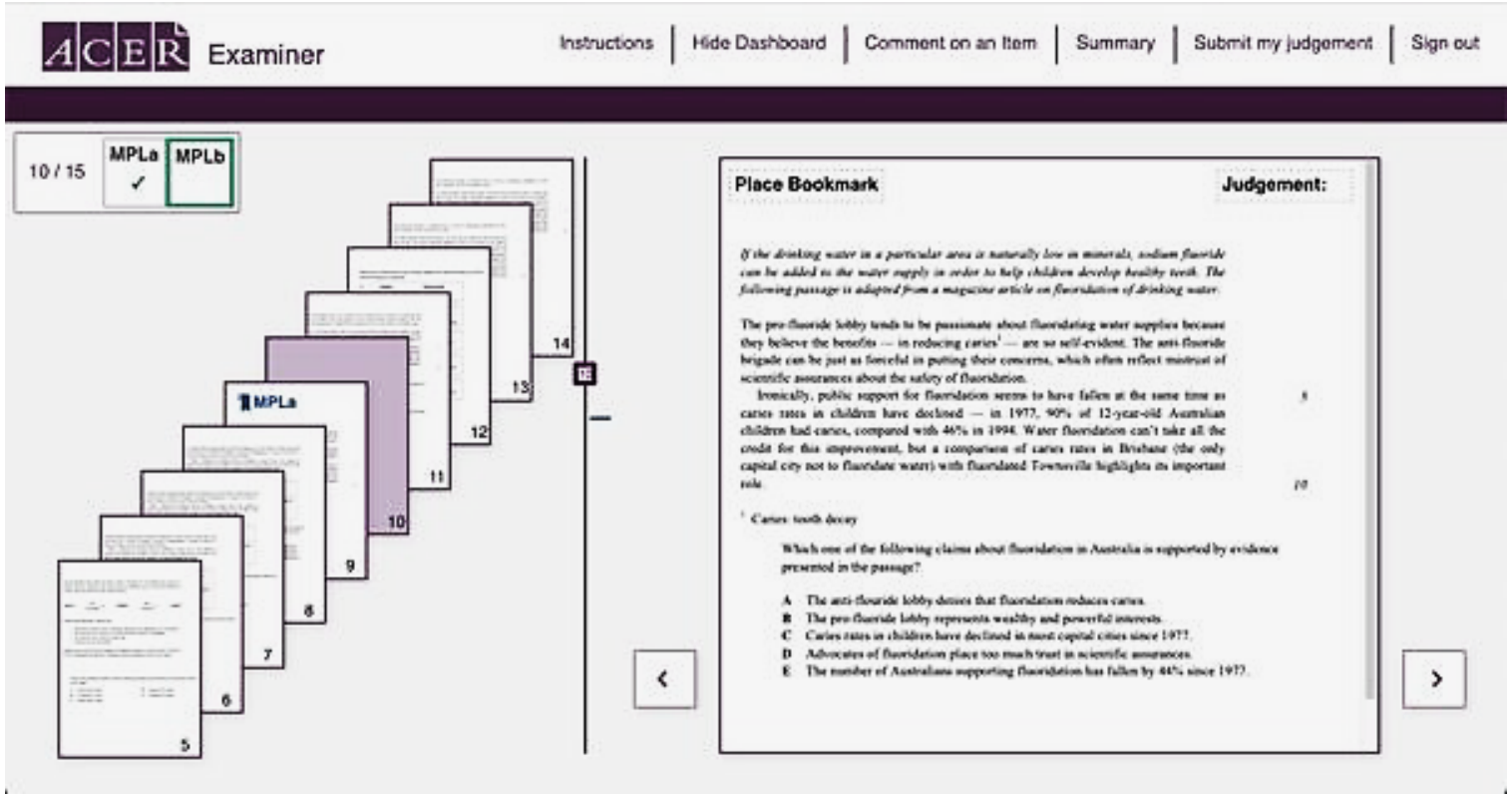
Educational learning area	Mathematics	Reading
Curriculum development	19	15
National or standardised assessment development	25	23
Teacher training, pedagogical development	18	19
Total	**62**	**55**

Procedure



17 hours commitment per person

Bookmark Method



Outcomes: quantitative [reliability]

Table 8: Cut-score location statistics across the standards and learning areas

Learning area	Experts	MPL	Mean	N	Median	Mode
Reading	ACER	MPLa	72	1	72	72
Reading	Participants	MPLa	73	11	72	72
Reading	ACER	MPLb	91	4	89.5	88
Reading	Participants	MPLb	90	22	88.5	88
Reading	ACER	MPLc	116	3	116	112
Reading	Participants	MPLc	119	11	120	120
Mathematics	ACER	MPLa	86	3	85	85
Mathematics	Participants	MPLa	87	10	88	88
Mathematics	ACER	MPLb	102	5	104	104
Mathematics	Participants	MPLb	104	24	103	103
Mathematics	ACER	MPLc	133	2	133	132
Mathematics	Participants	MPLc	129	14	132	132

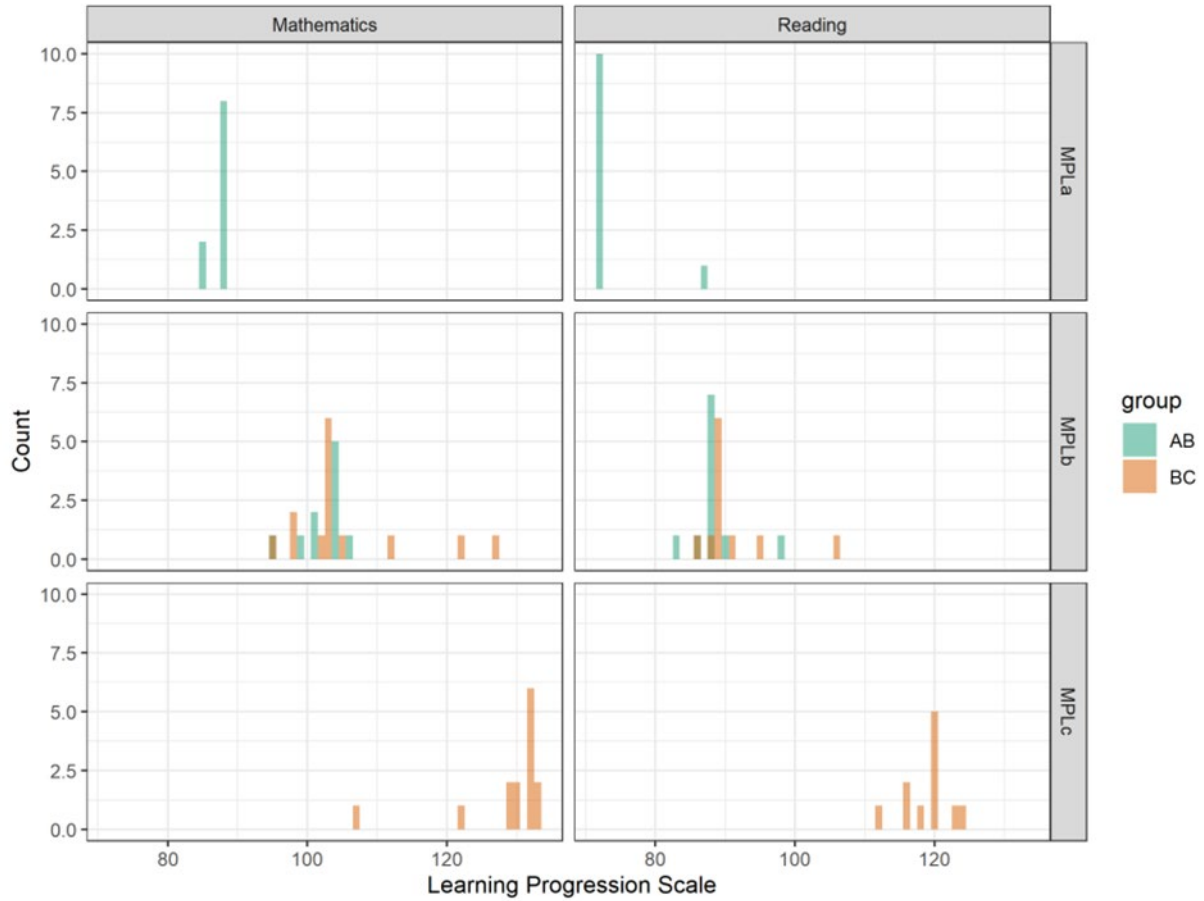


Figure 2: Cut-score location across standards and learning areas

Outcomes: quantitative [validation]

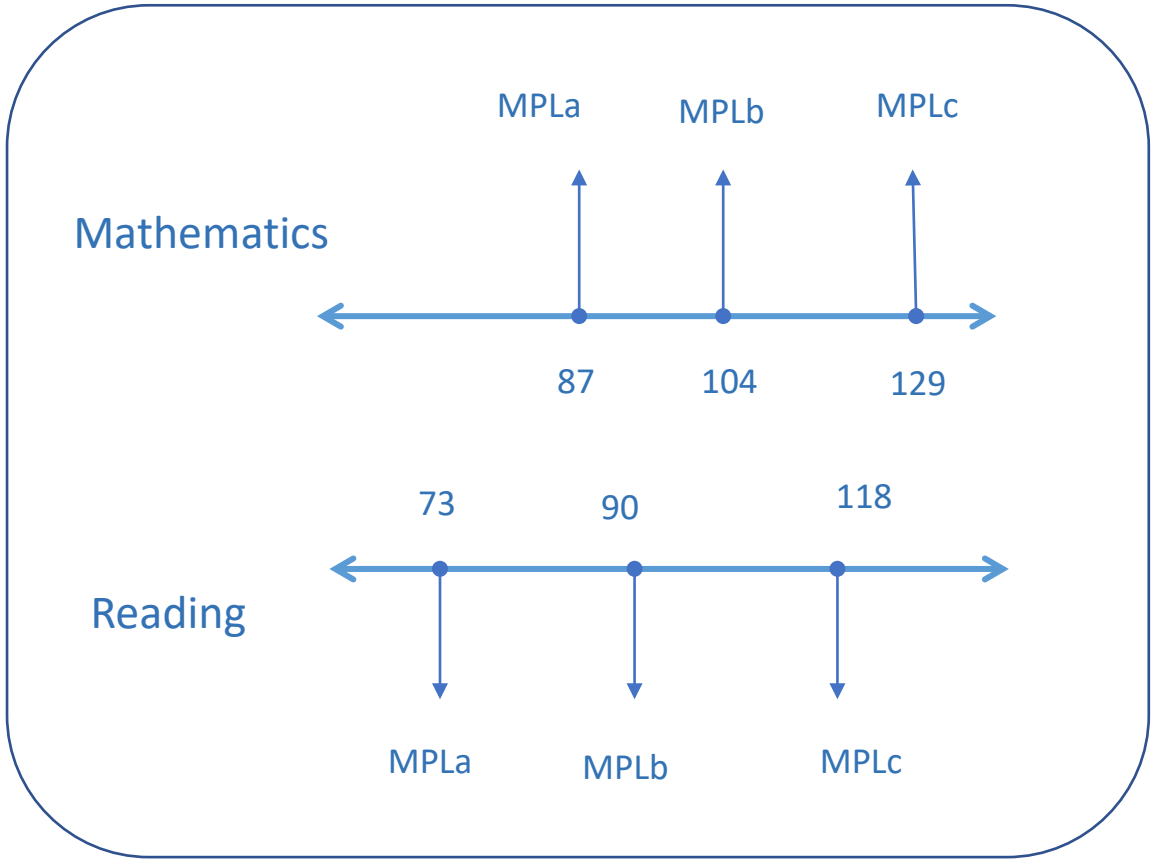
Table 9: MPLb cut-scores comparisons

Learning area	MILO MPLb on LPS	Mean MPLb	SD MPLb
Reading	93	90	4.5
Mathematics	100	104	6.7

Outcomes: quantitative

Theses are the proposed cuts scores as locations on the Learning Progression Scale. The Learning Progression Scales were transformed to have a mean of 120 and standard deviation of 10 scale score points.

Learning area	MPL	cut-score	cut-score SD
Reading	MPLa	73	4.3
Reading	MPLb	90	4.5
Reading	MPLc	118	3.6
Mathematics	MPLa	87	1.4
Mathematics	MPLb	104	6.7
Mathematics	MPLc	129	6.6



Outcomes: operations

Remote operation worked well

Positive feedback from participants

Conclusion

Successful quantitative method

Successful remote operation

User-friendly process

Applications and next steps

The process of constructing Learning Progression Scales and locating MPLs in language other than English.

- A bilingual exercise could also be considered where items are translated into rather than sourced from other languages.

The use of Pairwise Comparison Method incorporating items from a national or regional assessment alongside items from the Learning Progression Scales used in the ISSE.

- This would facilitate the placement of the MPLs onto the national or regional scale.

The International Standard Setting Exercise is a step closer to building a high quality global framework for countries around the world to use their own regional or national learning assessments for monitoring progress towards achieving SDG 4.

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Thank you