

SEA-PLM, creating better outcomes by and for Southeast Asia

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What is **SEA-PLM**?

The Southeast Asia Primary Learning Metrics (SEA-PLM) is a regional initiative to improve students' foundational learning. Every 5 years, Southeast Asian Ministries of Education can register to collect and report data on learning outcomes and schools' and students' environments. It helps to provide important feedback to clarify some educational questions like, for example:

- How well are Southeast Asian Grade 5 learners doing on foundational learning?
 - What influences students' achievement in Southeast Asia, like a student's gender and sociocultural background?
 - How do students perceive and value their learning environment?

The Ministry of Education of Tiger¹ commits to participate in the SEA-PLM 2024 survey, and collect transparent and quality data. The data collected during the survey will be used exclusively for scientific purposes. This year, the school in your community has been chosen randomly to administer the SEA-PLM tests and background questionnaire to Grade 5 selected students and some questionnaires to their parents, teachers and school heads. Other participating countries are Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Viet Nam and Timor Leste.

SEA-PLM surveys are managed by the Southeast Asian Ministers of Education Organization (SEAMEO) Secretariat and the United Nations Children's Fund regional office (UNICEF East Asia and Pacific Regional Office). In your country, all national operations are coordinated and monitored by the National Direction of Learning Assessment², at the request of, and on behalf of the Ministry of Education of Tiger. This is in accordance with one of the functions of the Ministry to carrying out national and international assessments of the attainment levels and academic achievement of students and reporting on such assessments to the Minister. In some countries, national partners may support The Ministry of Education of Tiger to mobilize more resources for collecting the data and communicating the results.

¹ "Tiger" refers here and below to a fictive country name for the purpose of a generic version in English.

² The name of the direction is fictive for the purpose of a generic version in English.

SEA-PLM survey

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The SEA-PLM survey measures Grade 5 students' mathematics and reading literacies through a standardized paper-pencil test developed in collaboration with participating countries and recognized experts. In each country, the test is translated into the official language(s) of school instruction. More information is collected to understand the school, the family context, and the learning environment.









As in all other participating countries, approximately 180 schools in Tiger were randomly selected to participate. In total, about 4,500 students, their parents and teachers are expected to participate in your country. Results are not individually reported for students and schools. Instead, students' and schools' responses are analyzed to study each participating education system.

SEA-PLM complements other national assessments led by Tiger and yourselves in your school. For all countries all over the globe, comparing school results from different metrics and methods is precious to review the strengths, areas for improvement, and changes of schools' results.



Test and questionnaire conditions

The entire assessment for the students lasts approximately 2-3 hours. Test conditions are the same in all schools in your country and other countries. It is essential that the data collection procedures are administered the same way in all schools. A Test Administrator trained by the Ministry will be in charge of administering the test and questionnaire to the students with the support of the school community. Failure to do so might invalidate the results of the survey.

Students first take 15' practice questions to familiarize themselves with the format of the test and how to complete the test. Students can ask any questions during this session. At the end of the practice session, students take reading comprehension and mathematics tests for 1 hour, completely independently. Most of the questions are multiple-choice questions (cross/circle the correct answer), for some questions only the students must provide a short-written response (only some words, one sentence). Students will not be disadvantaged in any way by non-completion of the student and test-taking behavior.



Then, they answer a 30-minute questionnaire, focused on their socio-cultural environment and their practice and perception of school and their well-being. During the student questionnaire session only, the Test Administrator is allowed to respond to students' queries about contextual questions. In the questionnaire, there are no "right" or "wrong" answers. If students feel uncomfortable answering a question, they are allowed to skip it without giving a reason. Responses are treated confidentially, and the database is anonymized. This means that it is no longer possible to associate a student with their answers.

The parents and the teacher from the Grade 5 selected class and the school leader must complete a questionnaire before the day of the student assessment. As for the student questionnaires, if parents feel uncomfortable answering a question, they are allowed to skip it without giving a reason. Responses are treated confidentially, and the database is anonymized. This means that it is no longer possible to associate a parent with their answers. Their results are confidential.

The same principles are applied to teacher and school leader questionnaires.

All tests and questionnaires must remain secured before, during and after the test administration in your school. The School Coordinator is responsible for communicating about the survey in your community, he will circulate more information about the modalities of participation.

To help prepare the students to take the SEA-PLM test, a small sample of Mathematics and Reading items used in previous SEA-PLM surveys are release publicly and commented below.

Mathematic	Unit name	Shells
sample items	Description	Adds 1-digit numbers in context
Sample item 1	Content strand	Number and algebra
	Process	Apply
	Difficulty	Easy
	Question format	Multiple choice question
	Correct response	С

Shells

Sopheap has 5 shells. She finds 3 more shells.

How many shells does Sopheap have now?

- **A**. 5
- **B**. 7
- **C**. 8
- **D**. 9

This is a very easy Number item for a grade 5 cohort. Solving it involves adding or "counting on" using single digit numbers.

Mathematic	Unit name	Medicine dose
sample items	Description	Solves a problem involving capacity
Sample item 2		with no unit conversion, in context
	Content strand	Measurement and geometry
	Process	Interpret
	Difficulty	Medium
	Question format	Short written response
	Correct response	10

Medicine dose

Dao has been given this medicine.

Each day Dao should take 10 milliliters (ml) of the medicine.



He has to take all the medicine in the bottle. For how many days should Dao take the medicine? Answer: _____ days

The student must generate (write) on answer instead of selecting an option. Typically, this makes the item more difficult. This is a moderately difficult measurement item. The main mathematical process drawn on by the item is interpret as it requires the student to decide what to do with the numbers given (divide the larger by the smaller). The actual arithmetic is not difficult and is made easier by the choice of numbers in the stimulus: 100 and 10.

Reading sample items

Below are examples of Reading Grade 5 items from the SEA-PLM 2019 Main Survey. Here is an example of a reading stimulus with three questions related to the stimulus associated with it.

Chai's new car

Chai's father gave him a toy car for his birthday. It was beautiful with lots of colours and flashing lights. Chai loved how shiny it looked but he liked it even more because it made his friends jealous.

This was the first time he had something that all his friends wanted to play with but he didn't let anyone else touch it, not even his best friend Tong. He tied a piece of string to it and pulled it around behind him. He started running to see how fast he could make the car go. As he ran, the car hit a stone and turned over. Two of the wheels came off.



He kept trying to fix the car but the wheels refused to stay on. He couldn't believe his bad luck. He started to cry.

Just then, he felt a hand on his shoulder. It was Tong. Chai couldn't take it anymore.

What do you want Tong? Just leave me alone, okay?"

But Tong's reply surprised him.

"I'm sorry your car broke. Why don't we make our own cars? I have seen my brother do it. They won't be as good as the one you had but at least we will be able to play with them together."

Chai was quite ashamed. All he said was, "How?"

"Come, I'll show you. All we need are some plastic bottles and some sticks."

Even though it didn't look as good as the car his father had bought him, he had a lot more fun with his new toy car.





Reading	Unit name	Chai's new car
sample items	Text type	Narrative
Sample item 1	ltem intent	Identifies the reason for a character's
		reaction in a narrative text
	Skill assessed	Interpret
	Difficulty	Medium-easy
	Item format	Multiple choice question
	Correct response	С

Why did Chai cry?

- A. because he didn't want Tong to play with his car
- B. because his friends were jealous of his car
- C. because his car was broken
- D. because Tong took his car

To find the answer students may seek the word "cry" which is at the end of the third paragraph. From there, they need to work backwards, comprehending the events of the second and third paragraphs, which are not able to be matched directly to the question. In particular, they need to interpret that the sentence "he kept trying to fix the car, but the wheels refused to stay on" means that the car was broken.

Students need to become familiar with narrative stories. Commonly there is a main character, who the reader identifies with, and other characters. Those characters are developed by showing how they react to the events in the story. It's advisable to expose students to narrative stories of their choice that suit their reading ability. Oral stories are very important for weak readers, so they can develop their familiarity with the narrative form. This familiarity makes it easier to comprehend stories when they are written.

Regarding this specific item, the intent is "Identifies the reason for a character's reaction in a narrative text". If students were reading this story in class, the types of questions that the teacher would ask include "Who is the main character? ", "Who is Tong?", "What happened?", "How did Chai feel?", "How was Chai's problem solved?", "How did the boys feel at the end? Why?" These types of questions encourage the student to investigate and interpret the motivations of the characters, which practises and improves the skill identified in this item.

Reading	Unit name	Chai's new car
sample items	Text type	Narrative
Sample item 2	ltem intent	Identifies the reason for a character's
		reaction in a narrative text
	Skill assessed	Interpret
	Difficulty	Medium
	Item format	Multiple choice question
	Correct response	С

What did Tong suggest that they could do?

- A. fix Chai's car
- B. buy new cars
- C. build new cars
- D. play a different game

To find the answer students need to first scan the text for the word "Tong" which appears four times before Tong's actual suggestion. From there, they need to interpret the suggestion "Why don't we make our own cars?", understanding that the verbs "make' and "build" mean the same in this situation. This process demonstrates the skill of interpreting in a narrative text.

The suggestions for teaching provided for the above item also apply here. Possible extension activities involving pair work, small group, or whole class discussion would involve students placing themselves at the centre of a similar story. For example, teachers can ask "Have you ever broken a favourite possession? What was it? How did you feel? Did anyone help you to fix it? Tell us what happened?" At the end of the discussion, students can write their own story down.

Another approach, for higher performers, would be to ask students to write a story about a time when a friend helped them to solve a problem. These stories can be shared with the class afterwards, providing another opportunity for discussion.

Reading	Unit name	Chai's new car
sample items	Text type	Narrative
Sample item 3	ltem intent	Evaluates a character's disposition
		using details across a narrative text
	Skill assessed	Interpret
	Difficulty	Medium-easy
	ltem format	Multiple Choice Question
	Correct response	D

In this story, what kind of boy is Tong?
A. lazy
B. lucky
C. selfish
D. helpful

To find the answer to this item, students need to have a general understanding of the text, and in particular the interactions between Tong and Chai. Details of their interactions are sprinkled throughout the text, and need to be interpreted along the way, in order to understand the kind and helpful nature of Tong's final suggestion.

Students need to become familiar with narrative stories. Commonly there is a main character, who the reader identifies with, and other characters. Using a text similar to this one, a narrative with two characters, teachers could ask students to highlight or underline the parts of the text that tell us something about each character. Ask students to discuss what these details show us about each character. For example, Chai says "Just leave me alone, okay?" How does Tong feel then? See if students can condense from feelings to one adjective. E.g. Chai feels like crying = adjective, "upset" or Tong suggests making their own toys = forgiving/patient/helpful. Work on adjectives to describe people and feelings in class. Other activities to support this include matching words to (dictionary) definitions, writing and performing short dialogues based on characters in narrative texts, and journal writing.



Join the SEA-PLM

survey!

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