



# SEA-PLM 2024 Technical Standards 1<sup>st</sup> edition



# SEA-PLM 2024 Technical Standards

## 1<sup>st</sup> edition

***Not for circulation***

***Only standards 1 to 15 have been revised or confirmed  
Standards 16 to 19 to be reviewed later after the 2024 Main Survey***

### **Purpose**

The purpose of this document is to specify the regional technical standards which guide the survey activities for the Southeast Asian Primary Learning Metrics (SEA-PLM) assessment, 2024 cycle. These standards provide a benchmark against which compliance of data quality and project implementation procedures by countries and technical organisations participating in SEA-PLM 2024 can be established and monitored.

An outline of the standard, its rationale and the mechanism by which achievement of the standard can be demonstrated is herein defined, in accordance with existing regional assessment standards. The need for consistency, precision and generalisability of the data collected is recognised, while also acknowledging that a certain level of variability is required for a regional assessment of this nature.

A clear distinction is made between those standards that apply to activities undertaken during the field trial and those relating to the main survey, as certain allowances are necessitated by the trialling of activities in preparation for the main study.

Issues relating to the attainment of the standards by participating countries will be addressed by the SEA-PLM Regional Secretariat and technical partners. This includes assessing the degree to which standards have been met, using the methods developed for data quality monitoring and evaluation. Additionally, these standards outline the requirements performing these activities, in accordance with the context of the existing cycle.

These regional Technical Standards have been established on the basis of project components or activities that relate to major processes, milestones, and deliverables. These Standards have been updated and approved by the SEA-PLM 2024 bodies of governance based on the SEA-PLM 2019 regional and national experiences and latest programme development. These components can be categorised into three major aspects of the project, which serve as the core elements upon which all standards are based:

1. Data standards;
2. Management standards; and
3. National involvement standards.

## Data Standards

### 1. Security of the material

#### *Rationale*

The goal of the SEA-PLM project is to improve the quality of education through system level monitoring of learner achievements. Prior familiarisation with test materials, or the training of students to respond explicitly to test items, can heavily degrade the validity and comparability of data derived from the SEA-PLM assessments. In order to effectively assess student achievement resulting from schooling, rather than short-term learning success, confidentiality and security of test materials is extremely important.

#### **Standard 1.1**

SEA-PLM materials designated as secure are kept confidential at all times. 'Secure materials' include all test materials, draft materials, data, results pertaining to the technical implementation of the assessment, and any project information marked as confidential. In particular:

- Only authorized project staff and participating students are able to access and view the test material, and only during specified timeframes;
- Only authorized project staff have access to secure SEA-PLM data and embargoed material; and
- Confidentiality arrangements are in-place to ensure that all participating staff agree to maintain the security of the project.

#### **Mechanism for Quality Assurance**

- Quality Monitoring
- Security arrangements as specified within the SEA-PLM Operation Manual

## Data Standards

### 2. Target population and sampling

#### *Rationale*

Measures need to be undertaken to ensure that samples from each of the countries participating in SEA-PLM are representative of the desired target population. Specific sampling techniques must be defined to demonstrate that the datasets derived from the country-level assessments can be compared cross-nationally and over-time with a sufficient level of accuracy, and that efforts are taken to avoid biases in sampling. Any national research questions and national monitoring/reporting purposes are supplementary goals and must ultimately cede to the larger project requirements.

Samples from each country must be drawn using sound and transparent sampling theory, and meet equivalent specified quality standards across countries within the agreed-upon timelines for SEA-PLM.

#### *Regional Target Population*

The population is defined in terms of the number of years of formal schooling in order to facilitate cross-national and time trends comparisons between participating countries.

UNESCO's International Standard Classification of Education (ISCED) is an internationally accepted classification scheme for describing the levels of schooling. ISCED Level 1 corresponds to the first stage of basic education or primary schooling.

The target population for SEA-PLM is all students enrolled in the grade that represents five years of schooling counting from the first year of ISCED Level 1, referred to in SEA-PLM as Grade 5.

#### *Eligible Schools and Students and Exclusions*

SEA-PLM is designed to describe the achievement of students across the entire target Grade. Therefore, all students in the target Grade are eligible, unless they fall into an exclusion category. All schools containing the target grade are eligible, unless they fall into an exclusion category. Criteria and implications are discussed in compliance with Standard 2.2.

#### *School Level Exclusions*

Exclusion of entire schools is anticipated to be rare, however schools entirely devoted to students with special needs (described in the student level exclusions) are excluded.

#### *Student Level Exclusions*

Students with functional disabilities. That is, physical disabilities such that they cannot perform in the SEA-PLM assessment situation are excluded. Students with a physical disability who are able to perform in the SEA-PLM assessment should not be excluded.

Student with intellectual disabilities. These are students who have a cognitive, behavioural or emotional disability confirmed by qualified staff, such that they are unable to take part in the SEA-PLM assessment. These are students who are cognitively, behaviourally or emotionally unable to follow even the general instructions to attempt the assessment. Students should not be excluded solely because of poor academic performance or typical disciplinary problems. It should be noted that students with dyslexia or other such learning disabilities should be accommodated in the test situation, within reason rather than excluded.

### **Standard 2.1**

Participating countries and contracted agency maintain an agreed upon timeline of activities for the exchange of sampling related information.

### **Standard 2.2**

The defined national target population is agreed upon between each National Technical Team and the contracted agency responsible for supporting sampling operations. The SEA-PLM Regional Secretariat will approve this process. The SEA-PLM defined national target population covers 95% or more of the Grade 5 national target population. School exclusions and student exclusions combined do not exceed 5%. Proposed exclusions are documented and quantified in each national sampling plan. Where a country does not achieve 95% inclusion national estimates will be reported with an annotation explicitly notes the proportion of exclusion.

### **Standard 2.3**

The target population is sufficiently described so as to allow for the implementation of random scientific sampling procedures, including systematic sampling of schools from the most recently available lists of schools that enrol students in the defined target population; and systematic sampling of classes from the most recently available lists of classes within sampled schools.

### **Standard 2.4**

The sampling plan for each country is agreed upon by the contracted agency responsible for supporting sampling operations in conjunction with the SEA-PLM Secretariat.

### **Standard 2.5**

Participating countries agree upon a stratification plan with the contracted agency responsible for supporting sampling operations that achieves maximum efficiency from the sample.

### **Standard 2.6**

Accurate sampling procedures are needed to ensure that the information derived from each assessment is sufficient to produce valid and reliable results. The contracted agency responsible for supporting sampling operations draws and documents school samples for the main survey using scientifically valid and consistent methods consistent with practice in other international large-scale assessments.

### **Standard 2.7**

National Technical Teams will provide the contracted agency responsible for supporting sampling operations with up-to-date lists of schools, known as the sampling frame, that contains information about student enrolment in the target grade or, where not available, other equivalent and agreed-upon information indicating student enrolments at each school. In addition to student enrolment estimates, the sampling frame should include sufficient information to enable contact with sampled schools and complete information for all stratification variables agreed upon according to Standard 2.5.

### **Standard 2.8**

National Technical Teams draw classroom-based samples within selected schools using software tools provided by the contracted agency responsible for supporting sampling operations and record all students within sampled classes in sampling tracking forms.

**Standard 2.9**

Unless otherwise agreed, only eligible students in the national desired target population are assessed.

**Standard 2.10**

The testing period is agreed upon between the National Technical Teams and the SEA-PLM Regional Secretariat and does not exceed 6 weeks. This window is flexible enough to allow for the administration, collection, and consolidation of information/data.

**Standard 2.11**

The minimum sample size is 150 schools and 4,000 students. In countries with fewer than 150 schools, all schools will be assessed and an appropriate increase of within-school sample may be agreed between National Technical Teams and the contracted agency responsible for supporting sampling operations.

**Standard 2.12**

Notwithstanding the minimums set in Standard 2.11, sample sizes will be sufficient such that 95% confidence interval widths around estimates of major survey outcomes at the national level should be within  $\pm 5\%$  for student percentage estimates and within 0.1 of a standard deviation for an estimated mean.

**Standard 2.13**

For survey results to be reported without annotation, countries must have a minimum school and student response rate. The final weighted school response rate is at least 85% of sampled eligible and non-excluded schools. If the school response rate is less than 85%, then an acceptable response rate may be achieved through agreed upon use of substitute schools. The final weighted student response rate is at least 80% of all sampled students across responding schools.

**Standard 2.14**

Absent sampled students may not be replaced by non-sampled students.

**Standard 2.15**

Sample weights will be calculated by the contracted agency responsible for supporting sampling operations to reflect the contribution of each participating student to the survey estimates, taking into account the sample design and adjustments for non-response.

## Data Standards

### 3. Language of testing

#### *Rationale*

Level of achievement can only be accurately reported for those students for which the test is administered in a familiar language. In instances where students have limited knowledge of the testing language, the test may underestimate their ability in the core cognitive domains.

Using a common language(s) for testing that align(s) with the language(s) of instruction in primary education within a country will contribute to the consistency of data and the relevance of the results acquired through the assessment.

#### **Standard 3.1**

Student assessment is undertaken using test booklets provided to students in the official language(s) of instruction in primary education, in the targeted grade or before.

Language of instruction may refer to:

- The language stated in the intended curriculum (i.e. published curriculum documents); or,
- The language(s) in which instruction takes place in the school or classroom.

Where more than one language of instruction exists, choice of language(s) is agreed between the National Technical Team and the SEA-PLM Regional Secretariat. Preparing test booklets in more than one language typically occurs if this serves to more accurately measure/compare student performance in the requisite domains and several languages, or when more than one language is required to accurately measure student performance across different sub-populations. Appropriate sampling considerations (as designated under the Sampling standards) and further resources may be required to accurately derive estimates for specific student groups.

#### **Standard 3.2**

The language(s) of the test booklets and translation plan is determined prior to the Field Trial and confirmed prior to Main Survey test administration through a language distribution plan. If it is decided that test booklets, and therefore test items, should be translated into an alternative language(s), the booklets must undergo field trialling prior to inclusion in the Main Survey.

#### **Standard 3.3**

National Technical Teams are required to participate in and complete all stages of translation, adaptation, verification, booklet layout and printing processes for each of the languages that the test will be delivered (as outlined in the SEA-PLM Translation and Adaptation guidelines). These include contributions to, and consultations with the contracted agency responsible for supporting national translation, verification and adaptation.

#### **Standard 3.4**

National Technical Teams will confirm the type of font to be used in advance of commencing translation work.

#### **Standard 3.5**

The demands for increased staffing and financial resources associated with administering the test in more than one language should be fully costed and planned for in advance of implementation with support and guidance from the SEA-PLM Regional Secretariat.



## Data Standards

### 4. Field Trial participation

#### *Rationale*

Field Trials have two important purposes:

1. Provide an opportunity to the National Technical Teams to pilot and trial the logistics of their survey operations in accordance with the regional technical standards.
  2. A psychometric purpose to allow for a detailed analyses of the cognitive and contextual items so that only those items that are valid, reliable, and fair are included in the Main Survey.
- The standards specified in this section highlight essential elements relating to activities undertaken as part of the Field Trial.

#### **Standard 4.1**

An assessment should be field trialled in a particular language if that language is used for instruction in more than 10% of the target population. In large-scale assessment, this standard has substantial implications for translation costs and logistics. As such, cost considerations need to be taken into account to establish context-specific standards regarding the number of language groups in the assessment project and in-country logistics, communication, training, and data collection.

#### **Standard 4.2**

The Field Trial sample should include at least 200 students per test item, in each subject and language, for languages of instruction that apply to more than 50% of the target population. For assessment languages that apply to between 10% and 50% of the target population, a minimum of 100 students per item is set.

The specifications for the assessment of languages that constitute less than 10% of the target population can be agreed upon between, Regional SEA-PLM Secretariat, and the contracted agency responsible.

#### **Standard 4.3**

Sampling approaches undertaken for SEA-PLM field trial activities do not need to be as rigorous as for the Main Survey, because data derived from the field trial are used for predominantly item analysis purposes, the results from which are not publicly reported. The Field Trial samples are convenience-based and may be restricted to a limited number of states or districts in order to contain costs and to minimise the burden on smaller jurisdictions.

The minimum sample size for the SEA-PLM Field Trial is 1000 for each participating country, from a minimum of 20-25 schools with students in Grade 5. It is recommended that the majority of schools selected should have at least two classes (target cluster size ~60-70 students per school). However, it is acceptable to include more than 2 classes with fewer students.

The selection of schools for the SEA-PLM field trial should be broadly representative of the range of different school types that occur within the target population. For example, the Field Trial sample should cover different sectors and geographical locations. The possible stratification variables for the SEA-PLM Field Trial include:

- Urbanisation (urban/rural)
- Funding (e.g. public/private)
- Management (e.g. secular/religious)
- School type (e.g. primary / middle)
- Socio-economic background (e.g. wealthier or poorer locations)



Agreement on the variables used to specify school selection within each country is agreed upon between National Technical Teams and the contracted agency responsible for supporting the field trial operations.

**Mechanism for Quality Assurance**

- A table showing the number of responses per item for each participating country
- A table comparing the proportion of the Field Trial sample and the population across the chosen stratification variables
- Item and scale statistics

## Data Standards

### 5. Adaptation of tests, questionnaires and data collection manuals

#### *Rationale*

In order to ensure that measures derived from assessment instruments are comparable across countries it is necessary for a set of standardised items to be used across all participating countries. Efforts should be made to ensure that each adapted item and booklet are both relevant to the target population and equivalent to the source version. Specific terms within instruments need to be adapted in such a way to ensure their comparability across countries. Both a lack of adaptations and their inappropriateness can jeopardise the comparability of data and the relevance of the results. Similarly, it is essential that equivalent information is provided to all students participating in SEA-PLM. Any instructions given to the students, as well as the procedures used throughout the test administration need to be equivalent. To achieve this, all individuals involved in the data-collection process (e.g. the test administrators, school coordinators) should each receive and deliver a set of standardised instructions.

#### **Standard 5.1**

Pre-determined periods for instrument and manual adaptation will be developed for the SEA-PLM Field Trial and Main Survey. Periods will be applicable to activities undertaken by both the National Technical Team and stakeholders involved and are subject to variation according to the scope of activities and responsiveness to achieve adaptation, translation, and verification tasks.

#### **Standard 5.2**

All test instruments translations are equivalent in meaning to source versions, as dictated by the application of national adaptations to local contexts. National adaptations are subject to agreement between the National Technical Team and the contracted agency responsible for supporting the development of the translation and verification process, and the contracted agency responsible for supporting the development of the test in source version.

#### **Standard 5.3**

Questionnaire instruments are equivalent to source versions, as dictated by the application of national adaptations to local contexts. National adaptations are subject to agreement between the National Technical Team and the contracted agency responsible for supporting the development of the translation and verification process, and the contracted agency responsible for supporting the development of the questionnaires in source version.

#### **Standard 5.4**

The Test Administrator and School Coordinators national versions are equivalent to the source version, as dictated by the application of national adaptations to local contexts. National adaptations are subject to negotiation and agreement between the National Technical Team and the contracted agency responsible for supporting country-level activities if applicable, otherwise the SEA-PLM Regional Secretariat. Any adaptation must be documented and recorded for proper documentation.

#### **Mechanism for Quality Assurance**

- National Adaptation Form (NAF) in which adaptations to questionnaire items are documented
- Field Trial and Main Survey Review/ Quality Assurance Surveys
- Item and scale statistics

## Data Standards

### 6. Translation of tests, questionnaires and manuals

#### *Rationale*

In order to ensure that measures derived from assessment instruments are comparable across countries, it is necessary that linguistically equivalent materials are used across all participating countries. Efforts should be made to ensure that the layout and content of each translated item and booklet are as equivalent as possible to the source version. Inappropriateness of translation resulting in deviations from source documentation can jeopardise the comparability of data.

#### **Standard 6.1**

The following documents will be required to undergo translation into the assessment language(s) for pilot purposes as specified in Section 3 – language of testing:

- All test instruments
- All questionnaire instruments
- The Test Administrator script from the Test Administration Manual

The translations should be linguistically equivalent to the English source version and the process should follow the Translation and Verification guidelines.

The contracted agency responsible for supporting translation and verification will work with the National Technical Team to negotiate the translation adaptation plan according to the national preferences to manage the following stages of the translation process:

For each national version, all new assessment and questionnaire items will undergo a double translation and reconciliation procedure in accordance with the respective country's preferred process (option A or B), refer to section – (v) Negotiate field trial school operation date, language distribution and translation plan. The provision and composition of the national translation teams/verification committees will be the respective country's decision.

- **Translation:** The national team or contracted agency will manage an independent language service provider to complete all the translations and necessary adaptations using the agreed upon National Adaptation Form (NAF). The translators will receive instructions and trainings to prepare two independent translations from the source version into each target language (or 'each test language'). The two translators will not be in contact with one another during the translation process.
- **Reconciliation:** The national team or contracted agency will merge the two independent translations into a single version, thus producing a reconciled version.
- **National Review:** the National Technical Team should complete the review of translations regardless whether it is produced by the language service provider or by the national translation team. During this review process, countries must check that the reconciled version remains true to the international English source, is accurate and error-free and uses language that is understandable for the students in the target cohort. The National Technical Team should review all translated material. Results of the review will be recorded in a dedicated Excel form and the review will include recommendations for modifications to the translations where considered necessary. If any adaptations to the local context and usage are required in the test materials, they must be documented by the National Technical Team and validated by the contracted agency.
- **Verification:** Following the National Review, the international verifier should complete an independent review of the translated material. The verifier should provide feedback in a Test Adaptation Spreadsheet (TAS) and send it to the domain experts. The

feedback will provide responses to the comments made during the National Review as well as any necessary comments and suggested revisions.

- Translation review: the domain experts will respond to feedback in the TAS, and either accept the revisions proposed by the National Technical Team and the Verifiers or provide explanations for why the revisions cannot be accepted.
- Final translations: The language service provider will implement the consolidated feedback in the translations.
- Final National Team Check: National Technical Team check that the translated material has been modified in line with the accepted feedback.
- Final Verifier's Check: The verifier should complete a final review of the material, taking into account feedback from the Final National Team check and ensuring the translated material is acceptable and that the translated material can be developed into test booklets and questionnaires.
- National Team sign-off: The files will be returned to the National Teams for final sign-off before test booklets and questionnaire assembling.

### **Standard 6.2**

All translation activities are required to be undertaken via the formal translation processes and in a timely manner. No translation can occur during the test administration.

### **Standard 6.3**

The majority of test items used in previous cycles will be administered unchanged from their previous administration, unless amendments have been made to source versions or outright errors have been identified in the national versions.

National versions of questionnaire items used in previous cycles will be administered unchanged from their previous administration, unless amendments have been made to source versions, outright errors have been identified in the national versions, or a change in the national context calls for an adjustment.

### **Standard 6.4**

After each Field Trial, International revisions to the international materials will, as far as possible, be limited to dropping a subset of items based on the analysis of the field trial data. If amendments are made to the international source versions or if residual outright errors have been detected in national versions, a formal process will be followed to record and implement the edits and submit the amended Main Survey versions to the independent international verification team. The formal validation and sign-off process for field trial to main survey changes will be formalised and carefully documented.

### **Mechanism for Quality Assurance**

- Adaptation Spreadsheets
- Translation Verification Reports
- Test booklets as used in the Field trial and Main Survey
- Item and scale statistics

## Data Standards

### 7. Test administration

#### *Rationale*

Certain variations in the testing procedure are likely to affect test performance. Some examples of these variations include: session timing, the administration of test materials and instructions given prior to and during testing, rules for excluding students from the assessment, and testing conditions. Ensuring the data is collected consistently using standardized procedures across countries will contribute to the development of a regional dataset that allows for valid cross-national inferences as well as country level system-wide monitoring of learner achievements. Additionally, the goal of the assessment is to obtain results that cover a wide range of areas. Given the assessment time constraints, test booklets include clusters of test items on a rotated basis, and booklets are allocated to students in a statistically random fashion. Student tracking forms will be used to ensure the correct allocation of booklets to students by Test Administrators.

#### **Standard 7.1**

Participating countries should collect data in a maximum of 6 weeks window from the start of the effective data collection. One same test administrator should collect data in one single school or in multiples schools given national itinerary preference, costs effectiveness of logistic for preparing and collecting quality data over a 6-week maximum window.

#### **Standard 7.2**

All test sessions should follow the procedures specified in the SEA-PLM operational manuals (e.g. the School Coordinator and Test Administrator manuals). Particular attention is drawn to those procedures that relate to:

- Test session timing;
- Maintaining test conditions;
- Student tracking; and
- Assigning booklets.

#### **Standard 7.3**

Test Administrators are trained in-person all together. In instances where this is not possible, a suitable alternative where that is feasible and aligns with the existing standards is negotiated and agreed between the National Technical Team, the contracted agency responsible for supporting country-level activities if applicable, and the SEA-PLM Regional Secretariat.

#### **Standard 7.4**

The relationship between Test Administrators and participating students must not compromise the credibility of the test session. The Test Administrator should be independent from the students and the school staff. The Test administrator should not be:

- An instructor of any student in the assessment session they administer;
- A member of staff in the school in which they administer the assessment;
- A relative of any of the staff on the school in which they administer the assessment; and
- A parent or close relative of any of the participating students.

#### **Mechanism for Quality Assurance**

- Student Tracking Forms with notes
- Quality Monitoring

## Data Standards

### 8. Additional survey component

#### *Rationale*

Survey implementation procedures should ensure that any additional survey components implemented by a country as part of the administration of a SEA-PLM survey do not compromise the integrity and comparability of the SEA-PLM tools and data.

#### **Standard 8.1**

Any additional components, outside of the regional standard survey components, such as derived and new cognitive or contextual domain, research question, instrument or new data collection mechanisms should not be labelled, branded and reported under the SEA-PLM trademark and products.

#### **Standard 8.2**

Participating countries must advise the SEA-PLM Regional Secretariat, regional partners of any interest and planned additional survey components to SEA-PLM in advance of implementation. The regional partners can advise the design of such components in line and completion with the SEA-PLM technical standards.

#### **Standard 8.3**

Additional survey components intended for students or other audience in the SEA-PLM sample or sub-sample should only be administered after the administration of the common SEA-PLM instruments, except where there is a justifiable reason for incorporating content within the existing regional material. Directions on the administration of the test are located within the operational manuals (e.g. Test Administrator's Manual).

#### **Standard 8.4**

Any additional components should have a demonstrated level of relevance for the participating country, should not interfere with existing content and be of a suitable length and complexity for the respondent.

#### **Mechanism for Quality Assurance**

- Test Administrator Manual
- Quality Monitoring

## Data Standards

### 9. Survey quality monitoring

#### *Rationale*

To obtain valid results from the assessment, the data collected must be of a high quality, using consistent, reliable and valid approaches. Data collection preparation and implementation processes, including national preferences are monitored and documented at several key stages of the project by the national team and/or authorized stakeholders outside the Ministry for monitoring and peer-learning purposes.

#### **Standard 9.1**

During the Field Trial or the Main Survey, at least 3-5 school site visits are conducted in each participating country by independent quality monitors authorized by the SEA-PLM Regional Secretariat, to observe test administration procedures and report to the SEA-PLM Regional Secretariat. It is recommended that at least one school in each state/province is monitored and preferably a range of different types of schools should be included in the sample for monitoring. Test administration sessions to be observed will be randomly selected by the SEA-PLM Regional Secretariat and the National Technical Team will be informed beforehand.

#### **Standard 9.2**

A maximum of 2 quality monitors (observers) can be present at any one school at any one time.

#### **Standard 9.3**

Any quality monitors (observers) should be familiar with the test implementation procedures of SEA-PLM and complete the observation checklist. Also, quality monitors (observers) must not have a personal interest in the results of the school or be personally affiliated with the observed school. Quality monitors will be silent observers in the school, and not interfere with the test administration process in any way.

#### **Standard 9.4**

The National Team must submit a Field Trial and Main Survey national report after a specified period of time after the field operations to provide the SEA-PLM Regional Secretariat and implementing partners with information on the process, lessons learned, national preferences and challenges during the Field Trial/Main survey preparation and data collection. All information shared by the country will be solely for national and regional project peer learning and programme improvement. Inputs will be used anonymously, and no individuals should be identified. Countries are encouraged to respond freely and accurately as much as possible.

#### **Standard 9.5**

Countries can implement their own school and survey quality monitoring process against their own national standards and preferences in compliance with the regional standards.

#### **Mechanism for Quality Assurance**

- Observation Checklist



## Data Standards

### 10. Printing of material

#### *Rationale*

Variations in print quality may affect data quality. When the quality of paper and print is very poor, the performance of students is influenced not only by their levels of proficiency, but also by the degree to which test materials are legible. To rule out this potential source of error, and to increase the consistency and precision of the data collection, paper and print quality samples are solicited from national centres in their first cycle of participation.

#### **Standard 10.1**

All student assessment material is printed using 80gsm paper and must meet minimum print quality.

#### **Standard 10.2**

The cover page of SEA-PLM assessment instruments used in schools contains all information and appropriate communication brandings as specified by the SEA-PLM Regional Secretariat.

#### **Standard 10.3**

The layout and pagination of all SEA-PLM test material is the same as in the source versions.

#### **Standard 10.4**

The layout and formatting of SEA-PLM questionnaire material is equivalent to the source versions.

#### **Mechanism for Quality Assurance**

- Technical Team Manager's Manual
- Data Management Manual
- Physical copies of test and questionnaires

## Data Standards

### 11. Response coding<sup>1</sup>

#### *Rationale*

To ensure the comparability of data across each of the participating countries, the responses from all test participants should be coded following the specified coding scheme. To facilitate this, all coding procedures are standardised, and all coders are required to complete training sessions specific to coding activities to ensure consistency in the way coding is undertaken.

#### **Standard 11.1**

The coding scheme described in the coding guide is implemented according to instructions provided by the item developers and data management specialist from the contracted agency responsible for supporting test development. Only response codes described in the coding guide are utilised.

#### **Standard 11.2**

Representatives from each National Technical Team are required to attend a SEA-PLM coder training session for both the Field Trial and the Main Survey. This will aim to ensure that members of the National Technical Team in each country are familiar with the specific requirements for response coding on SEA-PLM assessments.

#### **Standard 11.3**

Both the single and multiple coding procedures as specified in the SEA-PLM operations manuals or an agreed upon variation thereof, are implemented. Any variations require agreement between the National Technical Team and technical contractor.

#### **Standard 11.4**

Coders are recruited and trained following agreed procedures. Preferred procedures for recruiting and training coders are outlined in the SEA-PLM operations manuals. The optimum number of Coder Training sessions is dictated by the expertise of National Technical Team members, and resource availability, as agreed between the National Technical Team and technical contractor.

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<sup>1</sup> The terms coding, coders and codes are used instead of other terms such as marking, markers, marks, rating and raters.

## Data Standards

### 12. Data submission

#### *Rationale*

The timely progression of the project within the structured timelines depends on the quick and efficient submission of all data collected. With this in mind, one single data submission format is proposed, with a recommendation that all participating countries to submit one complete dataset to contracted agency responsible for data analysis.

#### **Standard 12.1**

Each SEA-PLM country submits its data in a single database, unless otherwise agreed between the National Technical Team and contracted agency responsible for data analysis.

#### **Standard 12.2**

Data are submitted in the format nominated by contracted agency responsible for data analysis using the database management tool developed for SEA-PLM.

#### **Standard 12.3**

Data for all instruments are submitted. This includes the test data, questionnaire data, and tracking data as described in the SEA-PLM operations manuals.

#### **Standard 12.4**

Data are submitted without recoding any of the original response variables, unless otherwise necessitated and agreed between the National Technical Team and the contracted agency responsible for data analysis.

#### **Standard 12.5**

Each SEA-PLM participating country's database is submitted with full documentation as specified in the SEA-PLM operations manuals.

#### **Mechanism for Quality Assurance**

- SEA-PLM Database Management Software (e.g. KeyQuest)
- Data Management
- Validity Reports

## Management Standards

### 13. Communication with contracted agency responsible for implementing SEA-PLM

#### *Rationale*

Given the tight schedule of the project, delays in communication between the National Technical Teams and ACER should be minimised. Therefore, National Technical Teams need continuous access to the resources provided by contracted agency responsible for implementing SEA-PLM.

#### **Standard 13.1**

The contracted agency responsible for implementing SEA-PLM ensures that qualified staff are available to respond to requests by the National Technical Teams during all stages of the project. The qualified staff:

- Are authorised to respond to National Technical Teams queries;
- Acknowledge receipt of National Technical Teams queries by the next working day;
- Respond to coder queries from National Technical Teams within two working days;
- Respond to other queries from National Technical Teams within five working days; or, if processing the query takes longer, give an indication of the amount of time required to respond to the query.

#### **Standard 13.2**

National Technical Teams ensure that qualified staff are available to respond to requests by the contracted agency responsible for implementing SEA-PLM during all stages of the project. The qualified staff:

- Are authorised to respond to technical contractor queries; and
- Respond to queries from the contracted agency responsible for implementing SEA-PLM within three working days, or if processing the query takes longer, give an indication of the amount of time required to respond to the query.

## Management Standards

### 14. Schedule for submission of materials

#### *Rationale*

In order to progress according to project timelines, efforts should be made to ensure that the National Technical Team Manager can submit project materials to the contracted agency responsible for implementing SEA-PLM within the allocated timeframes.

#### **Standard 14.1**

A work plan will be developed highlighting key milestones throughout the SEA-PLM Field Trial and Main Survey. The work plan will be developed through collaboration between the National Technical Team Manager and the contracted agency responsible for implementing SEA-PLM.

#### **Standard 14.2**

The following items should be submitted to the contracted agency responsible for implementing SEA-PLM in accordance with the timeline agreed on the work plan:

- An e-copy of the final booklets as sent to the printers is shared with the contracted agency responsible for implementing SEA-PLM in advance of the test administration.
- A print sample of booklets is archived securely for future reference (see Standard 10.1 for details);
- The National Adaptation Form (see Standard 5 for details)
- Complete sampling forms (e.g. sampling frame; see Standard 2 for details) for use in the main survey sample selection, or, for Field Trial activities, a list of selected schools;

#### **Standard 14.3**

The translation task should be completed in accordance with the timeline agreed on the work plan (see Section 6 for details).

#### **Standard 14.4**

Questionnaire materials should be translated after all adaptations have been agreed upon. Adaptations are agreed upon using the National Adaptation Form spreadsheet (see Section 5 for details).

#### **Mechanism for Quality Assurance**

- Questionnaire materials will be submitted for linguistic verification with the corresponding National Adaptation Form spreadsheets

## Management Standards

### 15. Management of data

#### *Rationale*

Consolidating and merging national databases is a resource-intensive task. To ensure the timely and efficient progress of the project, the contracted agency responsible for data analysis needs continuous access to national resources helping to rule out uncertainties and to resolve discrepancies. This standard aims to prevent substantial delays to the whole project.

#### **Standard 15.1**

The timeline for submission of national databases to the contracted agency responsible for data analysis is within four weeks of the completion of coding for the Field Trial and within eight weeks of the last day of coding for the Main Survey, unless otherwise agreed between the National Technical Team and the contracted agency responsible for data analysis.

#### **Standard 15.2**

National Technical Teams execute data checking procedures, and where possible, resolve data inconsistencies found during data entry sessions, as specified in the SEA-PLM Operation Manuals before submitting the database.

#### **Standard 15.3**

National Technical Teams appoint a data manager to be available upon submission of the database. The data manager:

- Is authorised to respond to data queries by the contracted agency responsible for data analysis,
- Is available to respond to queries for a month immediately following submission of the database unless otherwise agreed between the National Technical Team and the contracted agency responsible for data analysis,
- Is able to respond to queries from the contracted agency responsible for data analysis queries within two working days, and
- Is able to resolve data discrepancies.



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