

A publication by Aide et Action International Southeast Asia & China

Literacy & Numeracy in Lao DPR
Survey
Analytical Report

February 2019

This publication was prepared and published by Aide et Action International – Southeast Asia & China, led by Ms. Jennifer Evans and Dr. Richard Noonan of Aide et Action International – Laos.

Title: *Literacy and Numeracy in Lao PDR Survey: Analytical Report*

Published February 2019

© Aide et Action International Southeast Asia & China, 2019. All Rights Reserved.



Changing the world through Education

Aide et Action International – Southeast Asia & China

5th Floor, #322, Street 182
Sangkat Tek La-ork, Khan Toulkork
Phnom Penh,
Cambodia

Aide et Action International – Laos

Unit 39, Hom/Street 15,
Phonphanao Village,
Xaysettha district,
Vientiane capital,
Laos PDR

Aide et Action is an international non-profit with headquarters in Geneva, Switzerland, working in 19 countries supporting the development of sustainable education projects. Aide et Action was born in 1981 and has been working in Southeast Asia since 2003, first in **Cambodia** and later on in **Vietnam, Laos, China** and **Myanmar**. Since 2008, Aide et Action also has a fundraising office in **Hong Kong**. The teams in these Asian countries work closely together and have formed **Aide et Action Southeast Asia & China**, with a regional office in Phnom Penh, Cambodia.

TABLE OF CONTENTS

| | |
|--|-----------|
| <i>Table of Contents</i> | I |
| <i>List of Tables</i> | I |
| <i>List of Figures</i> | II |
| <i>List of Annex Tables</i> | II |
| <i>List of Acronyms</i> | II |
| | |
| 1. INTRODUCTION | 1 |
| 1.1 Background | 1 |
| 1.2 Aims and Objectives of the Survey | 1 |
| 2. IMPLEMENTATION | 2 |
| 2.1 Organization and Management | 2 |
| 2.2 Sampling and Administration | 2 |
| 3. FINDINGS | 5 |
| 3.1 Basic Overall Performance, by Subject and Grade | 5 |
| 3.2 Performance and Gender | 6 |
| 3.3 Performance Progress by Grade | 8 |
| 3.4 Performance and Ethnicity | 9 |
| 3.5 Performance by Grade, Subject, and School | 11 |
| 4. CONCLUSIONS | 13 |
| 5. RECOMMENDATIONS | 13 |
| ANNEX TABLES | 15 |

LIST OF TABLES

| | |
|--|-----------|
| Table 1: Numbers of Test Items, by Subject, Form, and Level | 3 |
| Table 2: Pedagogically Useful Comments on Students Failing to Reach Level 1 | 4 |
| Table 3: Distribution of Sample by Grade and Gender | 4 |
| Table 4: Distribution of Performance Level by Subject and Grade (Percent) | 5 |
| Table 5: Distribution of Performance Scores below Level 3, by Subject & Grade (Percent) | 6 |
| Table 6: Distribution of Performance Level for Grade 3, by Subject and Gender (Percent) | 6 |
| Table 7: Distribution of Performance Level for Grade 4, by Subject and Gender (Percent) | 7 |
| Table 8: Distribution of Performance Level for Grade 5, by Subject and Gender (Percent) | 8 |
| Table 9: Percent Distribution of Performance by Ethnicity, Subject, and Grade | 10 |
| Table 10: Mean Performance Level for Grade 3-5 Combined, by Subject and Ethnicity | 11 |
| Table 11: Variances between Means, by Ethnicity and Grade | 11 |
| Table 12: Mean Performance Levels, by Grade, Subject, and School | 12 |

LIST OF FIGURES

| | |
|---|----|
| Figure 1: Mean Scores, by Subject and Grade | 5 |
| Figure 2: Distribution of Performance Level for Grade 3, by Subject and Gender | 7 |
| Figure 3: Distribution of Performance Level for Grade 4, by Subject and Gender | 7 |
| Figure 4: Distribution of Performance Level for Grade 5, by Subject and Gender | 8 |
| Figure 5: Progress in Reading, Writing, and Arithmetic, by Grade | 9 |
| Figure 6: Distribution of Level, Grades 3-5, Reading, Writing, & Arithmetic by Ethnicity..... | 11 |

LIST OF ANNEX TABLES

| | |
|---|----|
| Annex Table 1: List of AEA Target Schools, by Province and District..... | 15 |
| Annex Table 2: Distribution of Sample by Grade, Gender, and Ethnicity | 16 |
| Annex Table 3: Test Instrument Designs for Reading, Writing, and Arithmetic | 17 |

LIST OF ACRONYMS

| | |
|--------------|--|
| AEA | Aide et Action (refers to Aide et Action International, more in particular to Aide et Action – Laos) |
| ICT | Information and Communications Technology |
| DESB | District Education and Sports Bureau |
| DGE | Department of General Education. (MOES) |
| ESQAC | Education Standards and Quality Assurance Center |
| MOES | Ministry of Education and Sports |
| MOU | Memorandum of Understanding. |
| RIES | Research Institute for Education and Sciences |

1. INTRODUCTION

1.1 BACKGROUND

1. Access to quality basic education remains a challenge in Laos, particularly in remote areas, where high drop-out rates and low literacy and numeracy rates prevail. Literacy in early grades remains a key challenge, with significant differences between urban and more rural and remote schools, which count many students who do not speak Lao as their first language. Aide et Action Laos (referred to below as AEA) is preparing a five-year project (2019–2023) to address different approaches to early literacy and numeracy in Lao PDR. To do so, baseline data need to be collected.

2. This report details the survey research conducted to gather the baseline data that will serve as the basis for future projects of AEA Laos.

1.2 AIMS AND OBJECTIVES OF THE SURVEY

3. Over the next five years (2019–2023) AEA will focus on enhancing the functional literacy and numeracy of children as a fundamental means to improve learning outcomes in educationally disadvantaged districts. A Memorandum of Understanding (MOU) between the Ministry of Education and Sports (MOES) and AEA is being prepared and anticipated to be signed in early 2019. AEA will work closely with stakeholders on the national, provincial, district, community and school levels to develop and adopt suitable tools and approaches based on the expected results and outcomes.

4. To measure the progress of learning outcomes, AEA consulted with the Education Standards and Quality Assurance Center (ESQAC), under MOES, to develop a potential partnership to gather information on assessment of student learning outcomes. ESQAC is a unit of MOES charged with improving the knowledge base regarding educational standards and guiding ongoing education interventions, practices, and investments. A partnership agreement was formally signed between ESQAC and AEA Laos in October 2018. Under the agreement, a team from ESQAC, assigned formally by MOES, would manage and implement the learning assessment activities and work plan as agreed under the MOU.

5. This Survey has two main objectives. The first objective is to produce a baseline assessment of primary literacy and numeracy in AEA's target schools. This baseline assessment would be used to tailor the project inputs and processes to meet the needs of the beneficiaries. The second objective is to provide an evidential and instrumental basis for subsequent midline and endline assessments. The midline assessment would be used to identify strengths, weaknesses, and lessons learned and to modify or strengthen the project to better meet the needs of the beneficiaries. The endline assessment would be used to identify further lessons learned and to support the improvement of future project activities.

6. The overall objective is to secure a basis for objective and reliable baseline, midline, and endline assessments of the current AEA Laos project, the global objective of which is to *enhance early literacy and numeracy of marginalized and often non-Lao ethnic children in poor and remote communities with mainly non-Lao ethnic populations.*

7. The data collected from the Survey and its findings will be shared between AEA Laos, MOES, and ESQAC. All three parties may make use of the data for their future projects and assessments. ESQAC is the owner of the data set.

8. Finally, the reader should bear in mind, especially in reading section 3. **Findings**, that the sample is by intention *not* nationally representative and not even representative at the provincial level. The schools targeted for AEA support are facing challenges related to the context in which they operate (see paragraph 6 above). They are schools, teachers, and students in need of support. It should also be noted that the Survey was conducted between 8 December 2018 and 6 January 2019 – approximately 3 to 4 months into the school year.

2. IMPLEMENTATION

2.1 ORGANIZATION AND MANAGEMENT

9. ESQAC coordinated with the Department of General Education (DGE), the Research Institute for Education and Sciences (RIES), and AEA for different roles – supervision, questionnaire development, and field surveys. MOES coordinated with relevant departments to organize meetings to discuss and inform participants about the action plan, finalize test items, agree on data collection methodology, and inform the schools, provincial and district authorities of the data collection date. ESQAC provided two teams to implement the study. A representative from AEA Laos took part in the study to document the proceedings and assist with the data collection process.

10. ESQAC coordinated the travel of the teams, either visiting different schools in the same district or testing different districts. Upon arrival at a new district, the teams met with the District Education and Sports Bureau (DESB) in order to get permission to conduct the study and to brief the assigned District Officer on the procedure. Then 2 to 4 members from the DESB would join the ESQAC team to assist in the data collection procedure.

11. Upon arrival at the schools the teams prepared the arrangement of the testing at a convenient location, usually outside the school in the shade or inside the principal's office. A team member sampled students to participate, selecting them randomly from the list of names. The classroom teachers were instructed to send students out one by one to be interviewed and tested, based on the names sampled from the list. The students were brought out from the classrooms one by one and randomly assigned to an available team member. The team member was responsible for time-keeping and instructing the students through the process. Each student was tested individually by a team member.

2.2 SAMPLING AND ADMINISTRATION

12. **Sampling.** The schools selected were AEA's target schools. Selection of these schools was based on two criteria. First, AEA already had an established relationship with the schools and the principals, which simplified communication and coordination. Second, because they were target schools for future projects, it was of interest to AEA to observe the learning outcomes as a part of the baseline assessment.

13. The intended sample size was 900 students, distributed evenly over 30 schools with 30 students per school, and 10 students per grade, covering Grades 3, 4 and 5. AEA and ESQAC agreed to sample 10 students from each grade in order to maintain a constant sample size across all 30 schools, as the number of students differs vastly across different schools. It was

also assumed that a sample of 30 students from each school would yield an adequate representation of the student population in the school.

14. An AEA representative sampled the students from a list of names provided by the class teachers for Grades 3, 4 and 5. When sampling, identifying variables such as names, academic performance, ethnicity and age *were not taken into consideration*. Wherever possible, 5 girls and 5 boys would be sampled from each grade. If a sampled student was absent, another student of the same gender was sampled in order to keep an even distribution between boys and girls. In the few cases where it was not possible to get a balanced distribution between boys and girls in a given grade in a given school, the sample in the *same grade in another sampled school* was augmented in order to achieve overall gender balance. In the final data set, girls slightly outnumbered boys (by less than 1.0 %), as shown in Table 3, page 4 below.

15. **Survey Instruments.** The Survey covered Lao language Reading, Lao language Writing, and Arithmetic. Together with ESQAC, AEA designed the format and contents of the test instruments. Three *different but equivalent* versions of test instruments (A, B, and C) for each subject and one data collection sheet were produced. The contents of all test instruments were *based on the Grade 3 curriculum* of the established national educational standards. The test instruments were compiled into three sets:

- Set A comprising Reading test A, Writing test A, and Arithmetic test A;
- Set B comprising Reading test B, Writing test B, and Arithmetic test B; and
- Set C comprising Reading test C, Writing test C, and Arithmetic test C.

16. Each subject – Lao Reading, Lao Writing, and Arithmetic – was divided into five skill levels, Level 1-5, with *three questions at each level*, for a total of 15 items per form and a total of 45 for each subject, as shown in Table 1. The test instrument design is outlined in Annex Table 3.

| Table 1: Number of Test Items, by Subject, Form, and Level | | | | | | | | | | | | | |
|--|------------------|----|----|-------|------------------|----|----|-------|---------------------|----|----|-------|-------------|
| | Reading, by Form | | | | Writing, by Form | | | | Arithmetic, by Form | | | | Grand Total |
| | A | B | C | Total | A | B | C | Total | A | B | C | Total | |
| Level 1 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 27 |
| Level 2 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 27 |
| Level 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 27 |
| Level 4 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 27 |
| Level 5 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 9 | 27 |
| Total | 15 | 15 | 15 | 45 | 15 | 15 | 15 | 45 | 15 | 15 | 15 | 45 | 135 |

17. Students from all three grades were *tested using the same three sets of test instruments*. When the testing session began, the team members distributed the three different sets of instruments (Forms A, B, and C) so as to reduce the chance of students overhearing the answers from their classmates being tested in the same subject.

18. Students had 15 minutes to complete the survey – 3 minutes for Reading, 7 minutes for Writing, and 5 minutes for Arithmetic. At the beginning of the testing process, students were given the three items at *Level 3*. If *at least two items* were answered correctly at a given level, the student was subsequently given three items at the *next higher level*. Conversely, if no item or only one item was answered correctly at a given level, the student was subsequently given three items at the *next lower level*. If the student was *unable to pass Level 1*, no score was assigned. For example, students who were *unable to identify a single basic consonant or recognize a 2-digit number* were not assigned a score. The final performance level was determined by the highest level the student managed to pass. For example, if a student managed to pass Level 4, but failed to pass Level 5, the student’s performance was marked as Level 4.

19. In Grades 3, 4, and 5 altogether, a total of 360 students (13%) failed to pass Level 1. In some cases when a student failed to perform even at Level 1, the test administrator provided a comment on the student’s performance. Altogether 50 “pedagogically relevant” comments were provided. These are shown in Table 2 to the right.

20. Formally only Levels 1 through to 5 are defined. For the statistical analysis of performance levels reported in section 3. Findings below, however, *students who were unable to pass even Level 1 were assigned a numerical score 0*, referred to below as “Level 0”.

21. *Distribution of the Sample by Province, District, and School*. A list of the target schools by province and district is provided in Annex Table 1.

22. *Distribution of the Sample by Grade and Gender*. The distribution of the achieved sample of students by grade and gender is shown in Table 3. Girls are very slightly over-represented at each grade level.

| Table 2: Pedagogically Useful Comments on Students Failing to Reach Level 1 | |
|--|----------|
| Reading | N |
| Cannot read [at all] | 9 |
| Cannot read consonants | 8 |
| Can only read some consonants | 1 |
| Can only recognize one letter | 1 |
| Can read but only alphabet | 1 |
| No score given | 1 |
| Writing | N |
| Cannot write consonants | 9 |
| Cannot write | 8 |
| No score given | 5 |
| Arithmetic | N |
| Only recognize one-digit numbers | 3 |
| Cannot calculate | 2 |
| No score given | 2 |

| Table 3: Distribution of Sample by Grade and Gender | | | | |
|--|--------------|-------------|---------------------|--------------|
| Grade | Girls | Boys | Gender Ratio | Total |
| Grade 3 | 149 | 147 | 1.01 | 296 |
| Grade 4 | 152 | 144 | 1.06 | 296 |
| Grade 5 | 152 | 150 | 1.01 | 302 |
| Total | 453 | 441 | 1.03 | 894 |
| Percent | 50.7 | 49.3 | n.a. | 100.0 |

23. **Distribution of the Sample by Ethnicity.** The distribution of the sample by grade, gender, and ethnicity is given in Annex Table 2. The distribution by ethnicity is purely a reflection of the distribution of students enrolled in the sampled schools (see paragraph 14 above). Altogether 5 students (0.6 %) were not identified by ethnicity (“Don’t know/No answer”). In the analyses of the learning outcomes results *by ethnicity* (section 3.4 Performance and Ethnicity) these 5 students of unknown ethnicity were omitted. They were included in all other analyses of learning outcomes.

3. FINDINGS

3.1 BASIC OVERALL PERFORMANCE, BY SUBJECT AND GRADE

24. The distribution of performance level by subject and grade is shown in shown in Table 4. This table also shows the means and standard deviations for each subject by grade, calculated on the numerical values of each level (Level 0 = 0, Level 1 = 1, etc.). Figure 1 shows the mean scores for each subject by grade.

| Level | Reading | | | Writing | | | Arithmetic | | |
|---------|---------|---------|---------|---------|---------|---------|------------|---------|---------|
| | Grade 3 | Grade 4 | Grade 5 | Grade 3 | Grade 4 | Grade 5 | Grade 3 | Grade 4 | Grade 5 |
| Level 0 | 31.1 | 15.9 | 8.6 | 24.3 | 14.9 | 5.0 | 13.2 | 6.1 | 3.6 |
| Level 1 | 37.5 | 42.6 | 27.2 | 47.0 | 46.3 | 35.8 | 23.0 | 14.9 | 13.9 |
| Level 2 | 10.1 | 8.4 | 7.0 | 9.8 | 9.8 | 8.9 | 49.7 | 51.7 | 46.7 |
| Level 3 | 2.0 | 3.0 | 4.6 | 4.4 | 8.8 | 14.2 | 9.5 | 16.2 | 19.5 |
| Level 4 | 6.8 | 9.8 | 14.2 | 10.1 | 9.8 | 16.9 | 2.7 | 7.1 | 8.3 |
| Level 5 | 12.5 | 20.3 | 38.4 | 4.4 | 10.5 | 19.2 | 2.0 | 4.1 | 7.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Mean | 1.5 | 2.1 | 3.0 | 1.4 | 1.8 | 2.6 | 1.7 | 2.2 | 2.4 |
| SD | 1.7 | 1.8 | 1.9 | 1.4 | 1.6 | 1.7 | 1.0 | 1.1 | 1.2 |

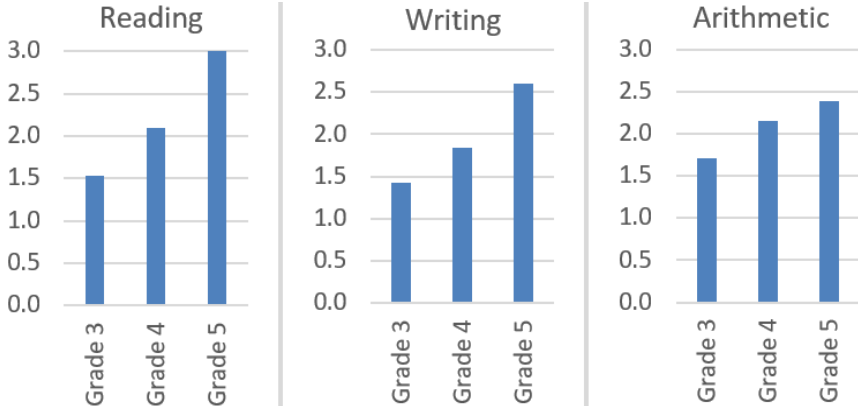


Figure 1: Mean Scores, by Subject and Grade

25. It can be noted that even in Grade 5, the mean score was *at or below 3* – the median Level for the Grade 3 curriculum, as assessed in the test instruments.

26. Table 5 gives the percent distribution of *scores below Level 3* – the median level for the Grade 3 curriculum. It can be noted that substantial proportions of Grade 5 students performed below the median level for the Grade 3 curriculum, especially in Arithmetic, where nearly two-thirds of Grade 5 students scored below Level 3.

| | <i>Grade 3</i> | <i>Grade 4</i> | <i>Grade 5</i> |
|------------|----------------|----------------|----------------|
| Reading | 78.7 | 66.9 | 42.7 |
| Writing | 81.1 | 70.9 | 49.7 |
| Arithmetic | 85.8 | 72.6 | 64.2 |

3.2 PERFORMANCE AND GENDER

27. Tables 6 through to 8 give the distributions of performance levels for each grade for Reading, Writing, and Arithmetic, by gender. For convenience, the cells giving the score for the gender with the higher mean are darker shaded. It may be observed that at all grade levels, girls scored somewhat higher in Reading and Writing than boys (except for Reading in Grade 5), while boys scored somewhat higher in Arithmetic. This is a common observation in studies of school achievement. The distributions are displayed in Figures 2 through to 4.

28. Figures 2 through to 4 display the distribution performance levels in Reading, Writing, and Arithmetic, broken down by gender, for Grade 3 through to 5. It can be noticed that the distribution of performance levels for Reading at Grades 3, 4, and 5 is bimodal, i.e., there are many students at the Levels 0-1 and at the Levels 4-5 but very few in the middle, at Levels 2-3.

| <i>Level</i> | <i>Reading</i> | | <i>Writing</i> | | <i>Arithmetic</i> | |
|--------------|----------------|-------------|----------------|-------------|-------------------|-------------|
| | <i>Girls</i> | <i>Boys</i> | <i>Girls</i> | <i>Boys</i> | <i>Girls</i> | <i>Boys</i> |
| 0 | 34.2 | 27.9 | 23.5 | 25.2 | 17.4 | 8.8 |
| 1 | 32.9 | 42.2 | 46.3 | 47.6 | 25.5 | 20.4 |
| 2 | 10.1 | 10.2 | 9.4 | 10.2 | 43.0 | 56.5 |
| 3 | 1.3 | 2.7 | 3.4 | 5.4 | 8.7 | 10.2 |
| 4 | 6.7 | 6.8 | 14.1 | 6.1 | 4.0 | 1.4 |
| 5 | 14.8 | 10.2 | 3.4 | 5.4 | 1.3 | 2.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Mean | 1.6 | 1.5 | 1.5 | 1.4 | 1.6 | 1.8 |
| SD | 1.8 | 1.6 | 1.4 | 1.4 | 1.1 | 1.0 |

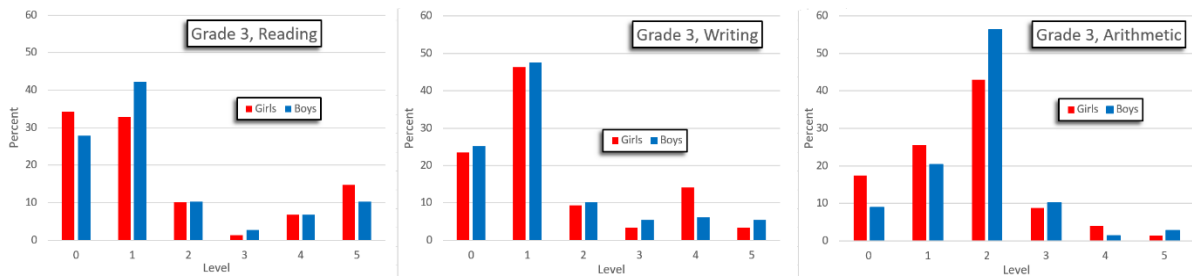


Figure 2: Distribution of Performance Level for Grade 3, by Subject and Gender

| Level | Reading | | Writing | | Arithmetic | |
|-------|---------|-------|---------|-------|------------|-------|
| | Girls | Boys | Girls | Boys | Girls | Boys |
| 0 | 17.1 | 14.6 | 13.8 | 16.0 | 7.2 | 4.9 |
| 1 | 38.8 | 46.5 | 48.7 | 43.8 | 18.4 | 11.1 |
| 2 | 7.2 | 9.7 | 5.3 | 14.6 | 47.4 | 56.3 |
| 3 | 2.6 | 3.5 | 9.9 | 7.6 | 15.1 | 17.4 |
| 4 | 10.5 | 9.0 | 10.5 | 9.0 | 7.9 | 6.3 |
| 5 | 23.7 | 16.7 | 11.8 | 9.0 | 3.9 | 4.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Mean | 2.2 | 2.0 | 1.9 | 1.8 | 2.1 | 2.2 |
| SD | 1.9 | 1.7 | 1.6 | 1.5 | 1.1 | 1.0 |

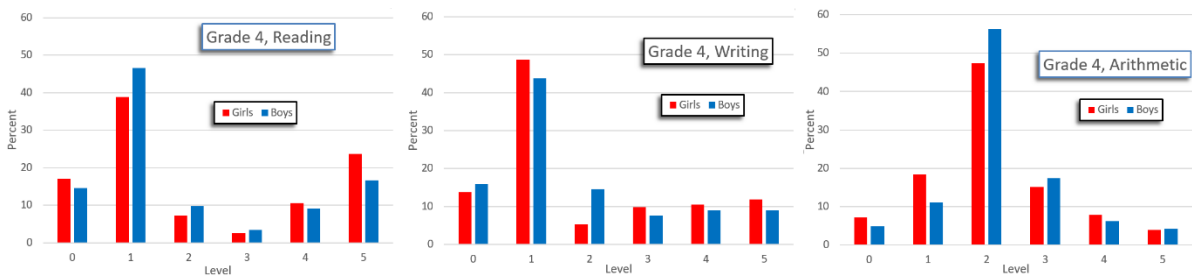


Figure 3: Distribution of Performance Level for Grade 4, by Subject and Gender

| Level | Reading | | Writing | | Arithmetic | |
|-------|---------|-------|---------|-------|------------|-------|
| | Girls | Boys | Girls | Boys | Girls | Boys |
| 0 | 10.5 | 6.7 | 6.6 | 3.3 | 4.6 | 2.7 |
| 1 | 27.6 | 26.7 | 33.6 | 38.0 | 17.1 | 10.7 |
| 2 | 5.3 | 8.7 | 7.9 | 10.0 | 47.4 | 46.0 |
| 3 | 5.9 | 3.3 | 15.8 | 12.7 | 16.4 | 22.7 |
| 4 | 12.5 | 16.0 | 16.4 | 17.3 | 5.9 | 10.7 |
| 5 | 38.2 | 38.7 | 19.7 | 18.7 | 8.6 | 7.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Mean | 2.97 | 3.11 | 2.61 | 2.59 | 2.28 | 2.50 |
| SD | 1.94 | 1.86 | 1.68 | 1.64 | 1.21 | 1.13 |

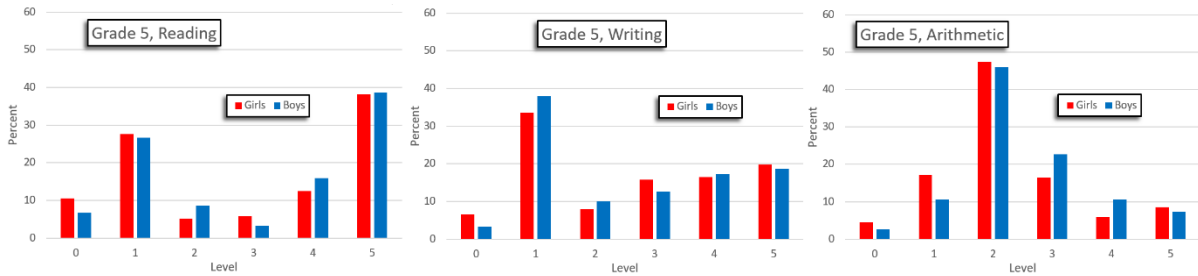


Figure 4: Distribution of Performance Level for Grade 5, by Subject and Gender

3.3 PERFORMANCE PROGRESS BY GRADE

29. Figure 5 (on the next page) is based on the evidence provided in Tables 6 through to 8 above but organized to facilitate visualization of grade-by-grade progress in performance levels. Mean scores for each subject and grade are shown in the red vertical lines. Such progress can be seen in each subject. It can be noted that for all subjects in Grades 3 and 4, the stacks representing Levels 1 or 2 are the highest. By Grade 5, for Reading, the stack representing Level 5 is highest, but the stack representing Level 1 is nearly as high. For Writing, the stack representing Level 1 is highest at all grade levels.



Figure 5: Progress in Reading, Writing, and Arithmetic, by Grade

30. Although the progress is visible, two patterns are pedagogically disturbing. First, in all grades a substantial number of students are performing at Levels 0 and 1 in Reading and Writing. Second, the distributions of the performance levels for Reading are distinctly *bimodal*, i.e., most students perform at the low level or the high level, while there are very few students performing at mid-level. This represents a pedagogical challenge for the schools, the teachers, and for the development of and access to teaching and learning methods and materials.

3.4 PERFORMANCE AND ETHNICITY

31. Table 9 shows the percent distribution of performance levels for each subject, by grade and ethnicity. The means for each ethnic group are also provided. To provide more robust estimates of performance levels by ethnicity, Table 10 gives the distribution for Grades 3-5 combined, and Figure 6 displays the evidence from Table 10 for each subject.

| Table 9: Percent Distribution of Performance by Ethnicity, Subject, and Grade | | | | | | | | | | | | | | |
|--|--------------------------|----------------|-----------------------|--------------------------|--|--------------------------|----------------|-----------------------|--------------------------|--|--------------------------|----------------|-----------------------|--------------------------|
| | <i>Reading</i> | | | | | <i>Writing</i> | | | | | <i>Arithmetic</i> | | | |
| | <i>Hmong Iu-Mien</i> | <i>Lao-Tai</i> | <i>Mon- Khmer</i> | <i>Sino- Tibetan</i> | | <i>Hmong Iu-Mien</i> | <i>Lao-Tai</i> | <i>Mon- Khmer</i> | <i>Sino- Tibetan</i> | | <i>Hmong Iu-Mien</i> | <i>Lao-Tai</i> | <i>Mon- Khmer</i> | <i>Sino- Tibetan</i> |
| Grade 3 | | | | | | | | | | | | | | |
| Level 0 | 42 | 5 | 32 | 70 | | 29 | 5 | 29 | 40 | | 21 | 2 | 11 | 30 |
| Level 1 | 34 | 29 | 44 | 30 | | 47 | 37 | 50 | 60 | | 14 | 15 | 32 | 30 |
| Level 2 | 5 | 20 | 10 | 0 | | 4 | 19 | 10 | 0 | | 47 | 63 | 46 | 40 |
| Level 3 | 1 | 5 | 2 | 0 | | 2 | 12 | 3 | 0 | | 8 | 17 | 8 | 0 |
| Level 4 | 2 | 20 | 5 | 0 | | 10 | 20 | 7 | 0 | | 7 | 0 | 2 | 0 |
| Level 5 | 15 | 20 | 8 | 0 | | 8 | 7 | 2 | 0 | | 3 | 3 | 1 | 0 |
| Total | 100 | 100 | 100 | 100 | | 100 | 100 | 100 | 100 | | 100 | 100 | 100 | 100 |
| Mean | 1.3 | 2.7 | 1.3 | 0.3 | | 1.4 | 2.3 | 1.1 | 0.6 | | 1.7 | 2.1 | 1.6 | 1.1 |
| Grade 4 | | | | | | | | | | | | | | |
| Level 0 | 17 | 8 | 17 | 33 | | 12 | 5 | 17 | 78 | | 8 | 2 | 6 | 11 |
| Level 1 | 48 | 30 | 44 | 67 | | 50 | 36 | 51 | 22 | | 10 | 9 | 16 | 89 |
| Level 2 | 8 | 17 | 5 | 0 | | 13 | 16 | 6 | 0 | | 48 | 58 | 55 | 0 |
| Level 3 | 1 | 5 | 4 | 0 | | 8 | 9 | 9 | 0 | | 14 | 19 | 17 | 0 |
| Level 4 | 13 | 6 | 10 | 0 | | 5 | 14 | 12 | 0 | | 12 | 8 | 4 | 0 |
| Level 5 | 13 | 34 | 20 | 0 | | 12 | 20 | 6 | 0 | | 8 | 5 | 1 | 0 |
| Total | 100 | 100 | 100 | 100 | | 100 | 100 | 100 | 100 | | 100 | 100 | 100 | 100 |
| Mean | 1.9 | 2.8 | 2.0 | 0.7 | | 1.8 | 2.5 | 1.7 | 0.2 | | 2.4 | 2.4 | 2.0 | 0.9 |
| Grade 5 | | | | | | | | | | | | | | |
| Level 0 | 13 | 0 | 10 | 10 | | 5 | 2 | 7 | 0 | | 4 | 2 | 5 | 0 |
| Level 1 | 35 | 13 | 27 | 60 | | 43 | 11 | 39 | 100 | | 9 | 6 | 20 | 20 |
| Level 2 | 4 | 9 | 7 | 20 | | 7 | 14 | 8 | 0 | | 44 | 47 | 46 | 80 |
| Level 3 | 2 | 8 | 4 | 10 | | 10 | 19 | 16 | 0 | | 29 | 17 | 16 | 0 |
| Level 4 | 15 | 19 | 13 | 0 | | 15 | 25 | 16 | 0 | | 4 | 13 | 10 | 0 |
| Level 5 | 30 | 52 | 39 | 0 | | 21 | 30 | 14 | 0 | | 11 | 16 | 3 | 0 |
| Total | 100 | 100 | 100 | 100 | | 100 | 100 | 100 | 100 | | 100 | 100 | 100 | 100 |
| Mean | 2.6 | 3.9 | 3.0 | 1.3 | | 2.5 | 3.4 | 2.4 | 1.0 | | 2.5 | 2.8 | 2.2 | 1.8 |

| | <i>Reading (%)</i> | | | | <i>Writing (%)</i> | | | | <i>Arithmetic (%)</i> | | | |
|---------|----------------------|----------------|------------------|---------------------|----------------------|----------------|------------------|---------------------|-----------------------|----------------|------------------|---------------------|
| | <i>Hmong Iu-Mien</i> | <i>Lao-Tai</i> | <i>Mon-Khmer</i> | <i>Sino-Tibetan</i> | <i>Hmong Iu-Mien</i> | <i>Lao-Tai</i> | <i>Mon-Khmer</i> | <i>Sino-Tibetan</i> | <i>Hmong Iu-Mien</i> | <i>Lao-Tai</i> | <i>Mon-Khmer</i> | <i>Sino-Tibetan</i> |
| Level 0 | 25 | 4 | 19 | 38 | 16 | 4 | 17 | 38 | 11 | 2 | 7 | 14 |
| Level 1 | 39 | 24 | 38 | 52 | 47 | 28 | 46 | 62 | 11 | 10 | 23 | 45 |
| Level 2 | 6 | 16 | 7 | 7 | 8 | 16 | 8 | 0 | 46 | 56 | 49 | 41 |
| Level 3 | 2 | 6 | 3 | 3 | 7 | 13 | 10 | 0 | 17 | 18 | 14 | 0 |
| Level 4 | 10 | 15 | 9 | 0 | 10 | 20 | 12 | 0 | 7 | 7 | 5 | 0 |
| Level 5 | 19 | 36 | 23 | 0 | 13 | 19 | 7 | 0 | 7 | 8 | 2 | 0 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Mean | 1.9 | 3.1 | 2.1 | 0.8 | 1.9 | 2.8 | 1.7 | 0.6 | 2.2 | 2.4 | 1.9 | 1.3 |

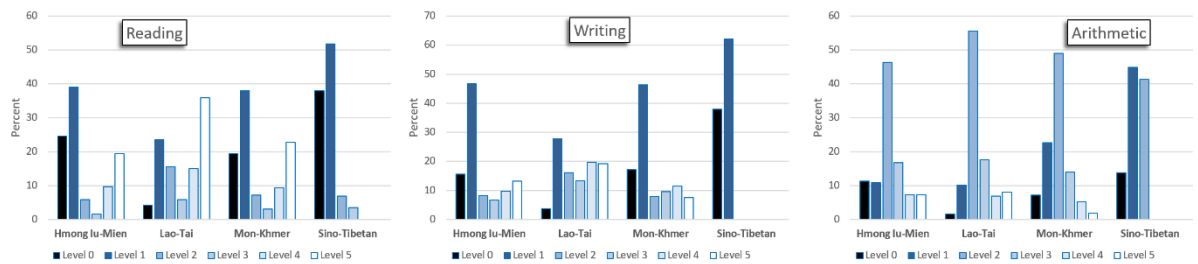


Figure 6: Distribution of Level, Grades 3-5, Reading, Writing, & Arithmetic by Ethnicity

| <i>Subject</i> | <i>Grade 3</i> | <i>Grade 4</i> | <i>Grade 5</i> | <i>Grades 3-5</i> |
|----------------|----------------|----------------|----------------|-------------------|
| Reading | 0.95 | 0.75 | 1.15 | 0.93 |
| Writing | 0.48 | 0.93 | 1.01 | 0.77 |
| Arithmetic | 0.17 | 0.49 | 0.19 | 0.25 |

32. A careful inspection of Figure 6 suggests that ethnicity is a more important factor influencing some subjects than others. In particular, the distributions of the stacks are much less varied for Arithmetic than for Reading and Writing.

3.5 PERFORMANCE BY GRADE, SUBJECT, AND SCHOOL

33. Table 11 shows the mean performance results from each grade in each subject at every target school. As with the statistical analysis above, each performance level has been given a numerical value representing Levels 0 through to 5 (see paragraph 24, page 5 above).

| Table 12: Mean Performance Levels, by Grade, Subject, and School | | | | | | | | | |
|--|---------|---------|------------|---------|---------|------------|---------|---------|------------|
| Province / District / School | Grade 3 | | | Grade 4 | | | Grade 5 | | |
| | Reading | Writing | Arithmetic | Reading | Writing | Arithmetic | Reading | Writing | Arithmetic |
| Vientiane Prov. | | | | | | | | | |
| Feung District | | | | | | | | | |
| Nampoung | 0.7 | 0.9 | 1.0 | 1.0 | 1.1 | 2.3 | 1.8 | 2.2 | 1.9 |
| Nongpor | 0.7 | 1.4 | 1.2 | 0.8 | 1.4 | 1.3 | 1.0 | 1.9 | 1.7 |
| Phaluang | 0.9 | 1.1 | 2.0 | 2.0 | 1.9 | 2.4 | 2.9 | 2.5 | 2.9 |
| Phonsavang | 0.2 | 0.5 | 1.2 | 1.3 | 0.8 | 2.1 | 2.9 | 2.2 | 2.7 |
| Phonsavath 1 | 2.0 | 2.2 | 2.4 | 3.9 | 3.7 | 3.0 | 4.6 | 3.8 | 2.8 |
| Phonsavath 3 | 2.7 | 2.4 | 2.3 | 2.2 | 2.3 | 2.4 | 4.0 | 3.3 | 3.5 |
| Phouphieng | 0.1 | 0.1 | 0.9 | 0.8 | 0.9 | 1.4 | 1.8 | 1.6 | 2.0 |
| Hinherb District | | | | | | | | | |
| Konkaen | 4.4 | 4.0 | 3.1 | 4.2 | 3.1 | 2.3 | 4.4 | 4.0 | 3.1 |
| Phonmouang | 3.7 | 2.6 | 2.6 | 3.3 | 2.2 | 3.1 | 4.9 | 4.2 | 3.1 |
| Mad District | | | | | | | | | |
| Hadngao | 1.0 | 1.0 | 1.6 | 0.8 | 1.0 | 1.8 | 2.5 | 2.5 | 2.0 |
| Houypamak | 1.0 | 1.0 | 1.4 | 0.7 | 0.9 | 1.7 | 2.6 | 1.5 | 1.6 |
| Meun District | | | | | | | | | |
| Konkam | 1.6 | 1.7 | 1.8 | 3.6 | 2.7 | 3.0 | 3.8 | 3.1 | 2.9 |
| Namlaow | 2.2 | 1.9 | 2.5 | 3.5 | 3.1 | 3.3 | 3.9 | 3.6 | 3.3 |
| Namor | 3.0 | 2.1 | 2.1 | 2.3 | 2.0 | 2.5 | 4.2 | 3.6 | 3.1 |
| Nampaed | 2.4 | 2.2 | 2.6 | 4.1 | 3.5 | 2.4 | 2.3 | 2.4 | 2.5 |
| Natew | 1.7 | 1.2 | 1.5 | 1.8 | 1.8 | 2.4 | 3.4 | 2.1 | 2.3 |
| Pakchanh | 1.8 | 1.4 | 1.6 | 3.1 | 2.3 | 2.6 | 4.5 | 3.5 | 3.1 |
| Phonsaene | 0.9 | 1.0 | 1.9 | 1.1 | 1.3 | 2.1 | 2.4 | 2.4 | 2.4 |
| Vangvieng District | | | | | | | | | |
| Houysee | 2.1 | 1.7 | 2.0 | 2.8 | 2.4 | 2.3 | 4.1 | 4.2 | 2.7 |
| Somsavath Tai | 3.8 | 3.1 | 3.4 | 3.9 | 3.5 | 3.0 | 5.0 | 4.6 | 3.6 |
| Oudomxay Province | | | | | | | | | |
| Beng District | | | | | | | | | |
| Bengluang | 3.8 | 2.9 | 2.4 | 4.0 | 3.1 | 2.4 | 4.6 | 3.7 | 2.5 |
| Mang | 0.0 | 0.0 | 0.5 | 0.3 | 0.1 | 0.5 | 2.3 | 1.8 | 1.8 |
| Namkong | 0.5 | 0.4 | 0.6 | 1.0 | 0.8 | 1.9 | 1.0 | 0.7 | 0.9 |
| Phakeo | 0.4 | 0.8 | 1.2 | 1.1 | 1.0 | 2.3 | 2.2 | 2.0 | 2.3 |
| Savang | 0.4 | 0.3 | 1.2 | 1.0 | 0.7 | 1.6 | 1.7 | 1.5 | 1.8 |
| La District | | | | | | | | | |
| Ano | 0.3 | 0.6 | 1.1 | 0.6 | 0.2 | 0.8 | 1.3 | 1.0 | 1.8 |
| Jakprae | 0.3 | 0.8 | 1.2 | 0.9 | 1.1 | 1.8 | 1.3 | 1.0 | 1.6 |
| Nongboua | 4.2 | 4.2 | 1.8 | 4.0 | 3.8 | 2.2 | 4.6 | 4.2 | 2.5 |
| Talolom | 0.0 | 0.0 | 1.6 | 1.2 | 0.9 | 1.7 | 3.8 | 2.2 | 1.8 |
| Tardmuan | 0.9 | 1.0 | 1.4 | 1.7 | 1.4 | 1.9 | 1.1 | 1.3 | 1.2 |

4. CONCLUSIONS

34. The purpose of the study was to gather appropriate baseline data for the future project(s) of AEA Laos as well as to gain an insight into the learning outcomes of students in the target schools. Having completed the Survey, AEA Laos now have a greater insight into the performance levels and learning outcomes of the students in the target schools and can make use of the findings to develop future tools to improve education levels.

35. The findings from the study are not necessarily surprising. Looking at the outcomes for the different grades, a general trend of progression can be observed. The performance scores increase in all three subjects grade by grade. Girls generally performed better in Reading and Writing than boys, but boys performed better in Arithmetic than girls. Performance disparities by ethnicity can also be seen. Students belonging to ethnic groups for whom Lao is the second language generally performed relatively poorly in Reading and Writing, although the differences in arithmetic performance are less striking. These are common observations within research in school environments and were expected prior to conducting the study.

36. One result that should be noted is the *bimodal performance distributions* with Reading: in all three grades there are substantial numbers of students who perform at Levels 0 and 1 or Level 4 and 5 and few students who perform at intermediate Levels 2 or 3. This suggests that the learning needs of the students in these remote and generally poor areas are not being met. This could possibly be a reflection of teaching and learning methods, or of a lack of teaching and learning materials, or could be due to other factors.

37. It is of importance to reiterate that the content of these tests was based on the Grade 3 curriculum. Bearing this in mind, the findings are even more striking considering the number of students in Grades 4 and 5 performing at Levels 0 and 1. If students are struggling to grasp the learning outcomes from the earlier grades, they will face even greater challenges in completing primary and pursuing lower secondary education, which by law is considered “basic education”.

5. RECOMMENDATIONS

38. The findings from the Survey have provided AEA Laos, ESQAC and MOES with data regarding student learning outcomes and an indication of performance levels amongst primary students in the target schools. These findings could be used as baseline information for other AEA projects. AEA Laos are planning to conduct several projects with various activities as a means to improve literacy, such as teacher training, school readiness, school management, and ICT to support the teachers and students to learn Lao and basic arithmetic. As observed in the findings, the learning needs of many students are not being adequately met. The findings and observations from the Survey could serve as a basis for developing ICT materials for students and teachers. By observing the areas which are lacking, AEA Laos can design ICT materials to combat the specific issue, especially for non-Lao speaking children.

39. In an attempt to combat the bimodal performance results observed for Reading, students would need to have more individual support in order to address their learning needs. A suggestion could be to have teachers conduct individual learning outcome assessments, in order to better track each individual student’s developments and ensure they do not fall behind the curriculum. If a student is continuously struggling to grasp the contents of the curriculum this will have a negative impact on their future learning and their chances of successfully pursuing higher education. Another suggestion would be to further develop Early

Childhood Care and Education in the country which could provide the needed Lao language support for many Lao children.

40. AEA Laos will also be working on developing pre-primary education. The findings from this Survey could be used to back up the argument that there needs to be effort into securing an educational foundation at an early age, in order to promote learning and development. As evident from the findings, a substantial number of students at Grades 4 and 5 have not grasped the learning curriculum of Grade 3. This issue needs to be addressed.

ANNEX TABLES

| Annex Table 1: List of AEA Target Schools, by Province and District | | | |
|--|-------------------------|-----------------|------------------------|
| <i>Vientiane Province</i> | | <i>Oudomxay</i> | |
| <i>District</i> | <i>School / Village</i> | <i>District</i> | <i>School/ Village</i> |
| Feuang | Nampoung | Beng | NamKong |
| Feuang | Phonsavath 1 | Beng | Savang |
| Feuang | PhaLuang | Beng | PhaKeo |
| Feuang | Phonsavang | Beng | BengLuang |
| Feuang | Phouphieng | Beng | Mang |
| Feuang | NongPor | La | TardMuan |
| Feuang | Phonsavath 3 | La | NongBoua |
| Hinherb | PhonMouang | La | Ano |
| Hinherb | Konkaen | La | TaLoLom |
| Mad | HouyPaMak | La | JakPrae |
| Mad | Hadngao | | |
| Meun | Konkham | | |
| Meun | NamLaow | | |
| Meun | Namor | | |
| Meun | Natew | | |
| Meun | Nampaed | | |
| Meun | Pakchanh | | |
| Meun | Phonsaene | | |
| Vangvieng | Houysee | | |
| Vangvieng | Somsavath Tai | | |

| Annex Table 2: Distribution of Sample by Grade, Gender, and Ethnicity | | | | |
|--|--------------|-------------|--------------|----------------------|
| <i>Grade & Ethnicity</i> | <i>Girls</i> | <i>Boys</i> | <i>Total</i> | <i>Percent Total</i> |
| Grade 3 | | | | |
| Don't know/No answer | 1 | 2 | 3 | 1.0 |
| Hmong Iu-Mien | 47 | 44 | 91 | 30.7 |
| Lao-Tai | 27 | 32 | 59 | 19.9 |
| Mon-Khmer | 69 | 64 | 133 | 44.9 |
| Sino-Tibetan | 5 | 5 | 10 | 3.4 |
| Total | 149 | 147 | 296 | 100.0 |
| Grade 4 | | | | |
| Don't know/No answer | 1 | 0 | 1 | 0.3 |
| Hmong Iu-Mien | 49 | 35 | 84 | 28.4 |
| Lao-Tai | 33 | 31 | 64 | 21.6 |
| Mon-Khmer | 65 | 73 | 138 | 46.6 |
| Sino-Tibetan | 4 | 5 | 9 | 3.0 |
| Total | 152 | 144 | 296 | 100.0 |
| Grade 5 | | | | |
| Don't know/No answer | 1 | 0 | 1 | 0.3 |
| Hmong Iu-Mien | 40 | 42 | 82 | 27.2 |
| Lao-Tai | 29 | 35 | 64 | 21.2 |
| Mon-Khmer | 79 | 66 | 145 | 48.0 |
| Sino-Tibetan | 3 | 7 | 10 | 3.3 |
| Total | 152 | 150 | 302 | 100.0 |
| Grades 3-5 | | | | |
| Don't know/No answer | 3 | 2 | 5 | 0.6 |
| Hmong Iu-Mien | 136 | 121 | 257 | 28.7 |
| Lao-Tai | 89 | 98 | 187 | 20.9 |
| Mon-Khmer | 213 | 203 | 416 | 46.5 |
| Sino-Tibetan | 12 | 17 | 29 | 3.2 |
| Total | 453 | 441 | 894 | 100.0 |

Note to Annex Table 2: The population of Laos comprises four main ethno-linguistic groups, distributed as shown here. The AEA target schools were selected in districts with relatively large non-Lao ethnic populations, but the samples of students within schools were drawn without reference to ethnicity.

| <i>Ethno-Linguistic Group</i> | <i>%</i> |
|----------------------------------|----------|
| Hmong Iu-Mien | 9.7 |
| Lao-Tai | 62.4 |
| Mon-Khmer | 23.7 |
| Sino-Tibetan | 2.9 |
| Total | 100.0 |
| Source: Population census, 2015. | |

| Annex Table 3: Test Instrument Designs for Reading, Writing, and Arithmetic | | | |
|--|---|------------------------|--|
| Reading | | | |
| <i>Level</i> | <i>Task</i> | <i>Number of Tasks</i> | <i>Requirement to Pass</i> |
| 1 | Read one consonant | 3 | Read two out of three out loud correctly without much difficulty |
| 2 | Read a one-syllable word | 3 | |
| 3 | Read a three-syllable word | 3 | |
| 4 | Read one sentence | 3 | |
| 5 | Read a paragraph | 1 | Read fluently |
| Writing | | | |
| 1 | Write consonant read by the tester | 3 | Write two out of three correctly |
| 2 | Write word seen in picture | 3 | |
| 3 | Connect two words to form a meaning | 3 | |
| 4 | Using words provided, fill in the blanks in a sentence | 3 | |
| 5 | Read paragraph and write down answers to questions asked | 3 | |
| Arithmetic | | | |
| 1 | Number recognition | 3 | Answer two out of three correctly |
| 2 | Addition of two-digit numbers (e.g. 14 + 10) | 3 | Calculate two out of three correctly |
| 3 | Subtraction of two-digit numbers (e.g. 54 – 46) | 3 | |
| 4 | Multiplication of two-digit numbers (e.g. 14 × 32) | 3 | |
| 5 | Division of a three-digit number by one-digit number (e.g. 168 ÷ 3) | 3 | |

VISION

A world where **quality education will be accessible to all** as the basis for mutual understanding, personal empowerment, and equitable societies throughout the world.

MISSION

To advance the cause of **education for all**, especially **primary education** for **vulnerable populations** whose fundamental right to education is not respected or is in jeopardy and to enable them to choose their future freely.

VALUES

Liberty

Respect

Solidarity

Equity

Integrity



Changing the world through Education