



Situational Analysis

# Student Learning Outcomes in Primary Education in Lao PDR



Ministry of Education and Sports

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## **Acknowledgments**

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## GLOSSARY

ACER	Australian Council for Educational Research
ASEAN	Association of Southeast Asian Nations
ASLO	Assessment of Student Learning Outcomes
BEQUAL	Basic Education Quality and Access in Laos
DEB	Department of Energy Business
DESB	District Education and Sports Bureau
DFAT	Department of Foreign Affairs and Trade (Australia)
DHE	Department of Higher Education
DNFE	Department of Non-Formal Education
DOF	Department of Finance
DOP	Department of Planning
DTVET	Department of Technical Vocational and Educational Training
ECE	Early Childhood Education
EGRA	Early Grade Reading Assessment
ESDF	Education Sector Development Framework
ESDP	Education Sector Development Plan
ESQAC	Educational Standards and Quality Assurance Center
JICA	Japan International Cooperation Agency
LABEP	Laos Australia Basic Education Project (1999–2007)
Lao PDR	Lao People’s Democratic Republic
MDGs	Millennium Development Goals
MOES	Ministry of Education and Sports
PESS	Provincial Education and Sports Services
PPC	Pre-primary curriculum
RIES	Research Institute for Educational Sciences
SREAC	Strategy Research and Educational Analysis Centre
VEDC	Village Education Development Committee

# 1. INTRODUCTION

## Background

The Lao People's Democratic Republic (Lao PDR) has made significant gains in its efforts to achieve universal primary education. UNESCO's Education for All global monitoring report in 2014 outlined areas of commendable progress. Lao PDR was noted in the top three performers for reducing out-of-school populations by at least 85%. The report also indicated that Lao PDR has a high likelihood of achieving a primary enrollment target of at least 95% and was on track to achieve gender parity in primary education by 2015. With its young demographic profile, Lao PDR has great potential for future economic and social growth if the youth of the country can be well educated so they can actively participate in achieving their aspirations and the nation's economic, cultural and social goals. In this regard, it is critical that students completing primary education have the necessary knowledge and skills required to prosper and to contribute to the country's human resource development. This will support the graduation of Lao PDR from Least Developed Country status by 2020.

According to the results of the national Assessment of Student Learning Outcomes (ASLO) for grade 5 students conducted in 2007 and 2009, however, student learning achievements in mathematics, Lao language and the subject 'World Around Us' remained low. In addition, a similar study for grade 3 students conducted in Bokeo Province in 2012 not only highlighted low learning achievement but also identified the lack of clear learning outcomes and expectations for students as a contributing factor. Based on the recommendations of these assessments, in 2014 the Ministry of Education and Sports (MOES) in Lao PDR, with support from UNICEF, decided to undertake a comprehensive review of the primary curriculum, starting with an assessment of the current status of student learning outcomes within primary education.

## Purpose and foci of analysis

Student learning outcomes are essential for improvement of instruction, strengthening teaching and learning materials and developing relevant formative and summative assessment systems. The availability of clear student learning outcomes and expectations is equally important for teacher preparation, as they guide the development of teacher training programs by specifying what teachers of primary school children need to know and be able to do to support students' achievement. Ultimately, student learning outcomes allow teachers, parents and other stakeholders to better monitor and support curriculum implementation, thereby ensuring that all students achieve the knowledge and competencies expected by the end of each grade.

As a first stage in the process of the MOES's curriculum reform, this situational analysis aims to:



- Understand whether the current competency framework adequately identifies the key knowledge and skills for primary school students, notably for continuing into study at a higher level
- Provide recommendations to MOES on the process by which to revise the existing primary education student learning outcomes and expectations
- Formulate recommendations for MOES on how student learning outcomes could be used to improve curriculum, instruction, student assessment, and so on
- Define a process for the revision and development of primary education student learning outcomes

To ensure that student learning outcomes are contextually relevant to children’s lives, align with the broader policy context and the regional Association of Southeast Asian Nations (ASEAN) qualifications framework, and are practical and realistic in their implementation by the teaching workforce in Lao PDR, this situational analysis focused on the following areas:

- Relevance and appropriateness of current learning outcomes for Grades 1 to 5, with consideration of national cultural, social and economic goals, and integration within the Association of Southeast Asian Nations (ASEAN)
- Process for developing existing student learning outcomes, including stakeholders involved and the methods used
- Student learning outcomes framework, including knowledge, skills, and attitudes that are crucial for daily life and the country’s future development; and consistency between the curriculum goals, objectives, and learning outcomes across primary grades
- Use of student learning outcomes, in particular how, for what and by whom the student learning outcomes have been used to date

Findings and recommendations from this analysis are expected to provide guidance for further improvement of the student learning outcomes framework and eventually to inform a future review of primary curriculum in Lao PDR. They will also contribute to the revision of instructional materials as well as the assessment system that is appropriate for local contexts.

## **Methodology**

A comprehensive desk review was undertaken to ascertain the extent to which the formal primary curriculum identifies the key knowledge and skills for primary school students and the appropriateness of how this learning is both articulated and sequenced. The review focused on the national primary curriculum, Teacher Guides and textbooks for Mathematics, Lao Language and the World Around Us, and also considered relevant policies and plans and the effectiveness of teaching methods promoted in the Teacher Guides in both supporting and maximizing student

learning. The review drew on the international literature on best practices in student learning outcomes and curriculum development, and used comparisons with highly regarded curricula from leading nations in education. The desk review considered the existing research and documentation available in Lao PDR on the challenges faced in the delivery of primary curriculum and variables which impact students' learning achievements.

Furthermore, this analysis relied heavily on participatory consultation methods by involving a variety of stakeholders, including curriculum developers, curriculum users and development partners, through face to face interviews and consultation workshop sessions, to design a detailed process for the revision and development of primary student learning outcomes. Feedback obtained from a wider audience, including teachers and parents, was also taken into consideration.

## 2. THE CONTEXT FOR PRIMARY EDUCATION IN LAO PDR

Lao PDR is located amid some of the world’s most rapidly developing economies. It was ranked 139<sup>th</sup> out of 187 countries in 2014 using the Human Development Index.<sup>1</sup> Table 1 provides an overview of selected socioeconomic indicators.

**Table 1: Lao PDR selected socioeconomic indicators**

Selected Socioeconomic Indicators		Source
Population	6,802,023	World Bank, 2015
GDP per capita	1,812.3 USD	World Bank, 2015
Life expectancy	66.1 years (2014)	World Bank, 2015
Prevalence of HIV (% of population aged 15–49)	0.3% (2014)	World Bank, 2015
Maternal mortality per 100 000 live births	197	World Bank, 2015
Access to improved sanitation (% of population with access)	71%	World Bank, 2015
Median age	21.9 years	United Nations Department of Economic and Social Affairs, p.35, 2015

Lao PDR has a low GDP per capita when compared to other countries in East Asia and the Pacific. It is a predominantly rural country with 68% of the population living in these areas. High rates of poverty are spread in pockets across the country. Poverty is particularly evident in remote and mountainous rural areas.<sup>2</sup> Lao PDR is ethnically, culturally and linguistically diverse, with 49 officially recognized ethnic groups<sup>4</sup> and more than 200 sub-groups. Most Lao-Tai (ethnic group) live in the lowland plains. The majority of remote communities are non Lao-Tai.

Improvement in the quality of education is a national imperative. Lao PDR has a young demographic profile with half of the population being younger than 20 years of age.<sup>3</sup> The number of primary school aged children is expected to continue growing at a rapid rate. Future economic and social growth will need to focus on ensuring that the country’s youth are well educated and able to participate actively in achieving their aspirations and contributing to the nation’s economic, cultural and social development.

<sup>1</sup> Phommanimith, K., 2008

<sup>2</sup> DFAT, 2014

<sup>3</sup> Ibid.

## Challenges for primary education in Lao PDR

Challenges to the Lao education system have been identified in many reports including those from MOES, UNESCO, UNICEF and the United Nations.<sup>4</sup> Table 2 identifies key challenges. These challenges impact on the feasibility of any proposed revisions to education in Lao PDR and the likelihood that such changes will result in improvements to student learning.

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<sup>4</sup> See MOES, UNESCO, UNICEF and United Nations in Bibliography

**Table 2: Major challenges for education in Lao PDR**

Challenge	Indicators
Poverty and universal primary education	<ul style="list-style-type: none"> <li>Poverty has strong regional and ethnic dimensions with a significantly higher rate of poverty in remote, rural areas.</li> <li>Almost one in three households lives in poverty in the northern regions. The incidence of poverty in central regions is similar.</li> <li>A significant number of primary schools are ‘incomplete’ meaning they are unable to offer education up to Grade 5.</li> <li>56 districts out of 143 are highly educationally disadvantaged.</li> <li>Costs associated with attending school, such as contributions for school resources, can make school unaffordable for some families.</li> </ul>
Early childhood education (ECE)	<ul style="list-style-type: none"> <li>Limited access to early childhood education: only 15% of students who entered Year 1 attended an ECE service in 2008.</li> <li>Enrollment remains limited to urban and wealthy communities.</li> </ul>
Literacy and Lao language acquisition	<ul style="list-style-type: none"> <li>Many remote communities are non Lao-Tai and come from backgrounds with no print or very limited exposure to print. A child’s first exposure to Lao language can be when they commence school.</li> <li>Non Lao-Tai children do not have access to a curriculum tailored to assist them to develop confidence in speaking and understanding basic Lao language before learning to read and write in Lao.</li> <li>Low levels of literacy are evident in primary school students. In the 2012 National Assessment of Student Learning Outcomes (ASLO III), 17% of students in Grade 3 reached pre-functional levels of literacy, 60% reached functional proficiency levels, while only 23% were identified as operating at independent levels of proficiency which is interpreted as being able to continue learning at the next level of schooling without remedial assistance.</li> <li>Literacy levels vary significantly between urban and rural populations.</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>Low levels of functional numeracy are evident in primary school students. In ASLO III, 53% of Grade 3 students reached pre-functional levels of numeracy, 23% reached the lowest level of functional proficiency, while only 12% of students were identified as operating at independent levels of proficiency.</li> </ul>
School attendance and school completion	<ul style="list-style-type: none"> <li>Physical distance from local schools and transience due to seasonal work increase the challenge of school attendance.</li> <li>Student absenteeism in primary years is high. Grade 1 attendance is particularly low with an average 12 % annual drop-out rate.</li> <li>30% of children drop out before completing primary education.</li> <li>High repetition rates are prevalent, especially in primary education.</li> </ul>

**Table 2 (continued)**

Challenge	Indicators
Curriculum and resources	<ul style="list-style-type: none"> <li>• The primary curriculum does not effectively support acquisition of fundamental literacy and numeracy skills.</li> <li>• The primary curriculum is overcrowded, placing a burden on both teachers and students.</li> <li>• Multi-grade classrooms constitute a significant proportion of classes. The curriculum delivered through Teacher Guides is not readily adaptable to these classrooms.</li> <li>• There is a critical shortage of textbooks and basic teaching and learning materials especially in rural areas.</li> <li>• In practice, a number of pedagogical advisers, schools and teachers have limited knowledge on how to support the range of learners in Lao primary schools.</li> </ul>
Teacher quality	<ul style="list-style-type: none"> <li>• Staffing some remote or rural schools is a challenge. Some primary school teachers recruited from local communities have limited levels of education.</li> <li>• In-service training for teachers is irregular.</li> <li>• Teachers frequently rely on rote learning strategies supported through a reliance on Teacher Guides and textbooks.</li> <li>• Many teachers need support to better understand how children learn and to expand their repertoire of strategies to cater for the range of student learning needs and contexts. Teachers with multi-grade classes need more in-school pedagogical support.</li> </ul>
Complex policy and reform environment	<ul style="list-style-type: none"> <li>• The complexities associated with the significant challenges listed above are further exacerbated by the number of reform agendas and initiatives sponsored by the range of development partners and donors. While there may be significant inherent value in each initiative, the development of coherent education services that deliver the required improvements in learning requires longer-term, coordinated planning to align and strengthen priority strategies and services.</li> </ul>

A key to understanding the complex dynamics and challenge to achieving improved educational outcomes in the Lao PDR is that poverty, ethnicity and gender are significant indicators of educational access and where these intersect, disadvantage is most profound.<sup>5</sup>

This complex education context is likely to require carefully targeted and coordinated interventions across both the primary and secondary sectors to address the significant capacity gaps that exist. In particular, the strong intersections between poverty, nutrition and education indicate that, in the future, programs will need to give much greater emphasis to coordinating interventions across the education, health and rural development sectors, with a focus on supporting both the wellbeing and education of the whole child within their local community.<sup>6</sup>

<sup>5</sup> DFAT, 2014

<sup>6</sup> Ibid.

## Administration of primary education

In 1996, five-year primary education was made free for all children between the ages of 6 and 14. In 2000, access to education was further strengthened through The Education Law stipulating that all Lao citizens have the right to education without discrimination regardless of their ethnicity, origin, religion, gender or social status. Primary education, spanning Grades 1 to 5, was made compulsory commencing from age 6.<sup>7</sup>

In 2005, the minimum age for admission to employment was set at 14 years. In 2009, general education was extended from 11 years (5 in primary + 3 in lower secondary + 3 in upper secondary) to 12 years (5 in primary + 4 in lower secondary + 3 in upper secondary). The amended Law of Education<sup>8</sup> stipulated primary and lower-secondary education as compulsory education. From preschool to upper-secondary education (public schools) are free of charge<sup>9</sup>.

Lao PDR has four administrative levels: central, provincial, district and village.

The central or national level has multiple ministries. MOES is one of these ministries and oversees all education services, including the Department of Preschool and Primary Education and the Department of Teacher Education. Primary education services cover approximately 8,500 schools and support students across 11,640 villages.

The Research Institute for Educational Sciences (RIES) is responsible for developing the curriculum, teacher guidelines and student textbooks for primary education. RIES is also responsible for the survey and assessment of student learning outcomes.<sup>10</sup>

Provincial Education and Sports Services (PESS) oversee education development in their geographic areas. They implement the strategic plans and policies developed by MOES and the national government. Provinces manage and supervise District Education and Sports Bureaus (DESB) and oversee the provision of lower secondary school services and vocational education. Provinces are responsible for establishing plans and budgets to achieve set accountabilities.

DESB is spread across the provinces. Districts are responsible for planning and developing pre-primary and primary school services for children (formal education) as well as providing access to a primary education for adults (non-formal education).

At the local level, Village Education Development Committees (VEDC) support their local schools and the involvement of the community in school affairs.

Figure 1 below shows the approximate ages and stages of the education system.

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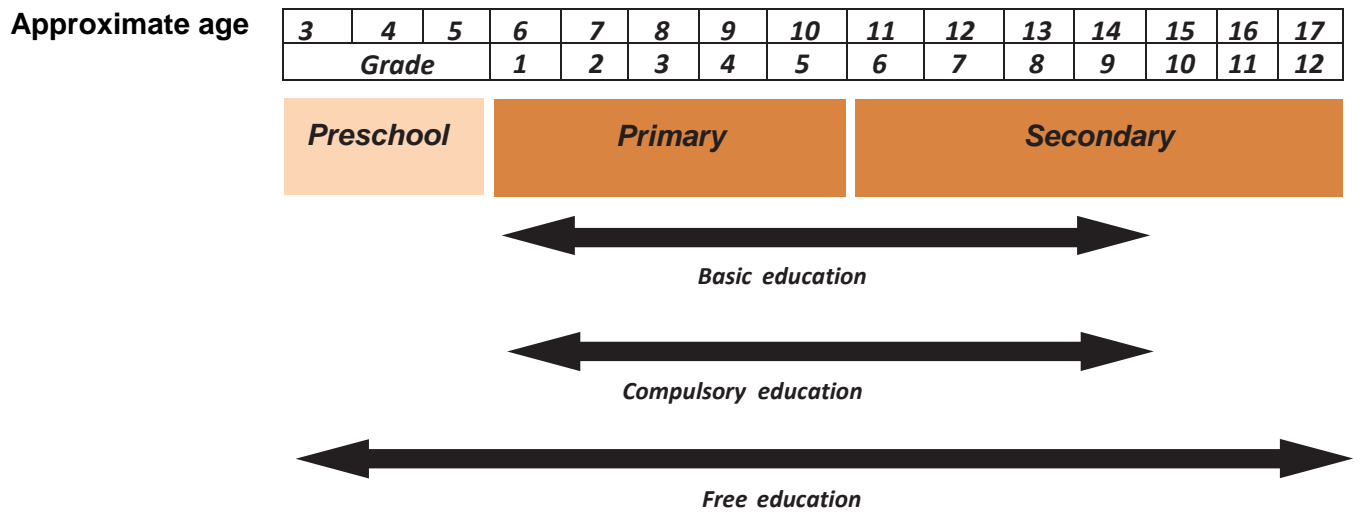
<sup>7</sup> Phommanimith, K., 2008

<sup>8</sup> National Assembly (2015)

<sup>9</sup> MOES (2012)

<sup>10</sup> RIES, 2014

Figure 1: Education structure in Lao PDR: Approximate starting age and duration





### 3. POLICY

This section identifies the extent to which overarching aims for education identified in educational policy documents, particularly regarding education quality and relevance, provide clear, consistent direction to the education community, identify the essential competencies required to fulfill Lao PDR's aspirations for its society and support high levels of literacy and numeracy attainment.

#### Policy context

Education lies at the core of Lao PDR's development as it strives to create a skilled and knowledgeable society. Universal access to a quality and equitable education and high levels of literacy and numeracy attainment are critical in supporting economic growth and reducing poverty. One of the key issues impeding education sector growth and undermining recent gains is attrition.

While net enrolment has increased, retention rates have not, with high drop-out rates recorded for Grade 1 and low survival rates to Grade 5.<sup>11</sup> Accordingly, an increasing number of students are enrolling in schools in Lao PDR but they do not stay. This is critical, as retrieving drop-outs who have left the system due to incomplete facilities or programs, poor teaching and learning resources and approaches, or an irrelevant curriculum, is far more complex and costly than attracting new students. The other critical (and interconnected) issue hampering education sector development is the severe shortage of qualified teachers, resulting in incomplete schools that are unable to offer the full five years of primary schooling.<sup>12</sup> These issues underpin the case for improving the quality and relevance of education in Lao PDR.

#### Policy frameworks and targets for education in Lao PDR

The current education policy framework in Lao PDR concentrates on the three priorities of expanding equitable access, improving education quality and relevance, and strengthening educational planning and management. These pillars are set out in the Education Sector Development Plan (ESDP) 2011–2015, the Government of Lao PDR's five-year plan for education. The plan was developed by the government with the support of development partners to direct the development of the sector during the period of the 7th National Socio-Economic Development Plan. The ESDP identifies strategies for achieving the Millennium Development Goals (MDGs) 2 and 3 and the six Education for All goals by 2015.<sup>13</sup>

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<sup>11</sup> EPDC, 2014

<sup>12</sup> MOES, 2011

<sup>13</sup> Ibid.

## Education Sector Development Plan

ESDP consists of three pillars:

Pillar 1: Expand equitable access

Pillar 2: Improve quality and relevance

Pillar 3: Strengthen planning and management with a focus on improving financing strategy, planning and management and strengthening sector performance monitoring and inspection.

Policies and plans under Pillar 2 are of most relevance to this assignment: to analyze the national system/structure for student learning outcomes in primary education, as improvement of student learning outcomes in Lao PDR is contingent on improving the quality and relevance of inputs related to teaching and learning.

The overall objective of Pillar 2 is 'To improve quality through a combination of supply-side strategies (availability of books and qualified teachers) and better governance-focused strategies including school and student performance monitoring, accreditation of degrees, diplomas and certificates and establishment of quality assurance systems'.<sup>14</sup> The specific objectives and targets related to Pillar 2 are organized into five policies:

Policy 1: Curriculum Reform and Instructional Materials Provision

Policy 2: Pre- and In-Service Teacher Training and Staff Development

Policy 3: Equitable Teacher Deployment and Distribution

Policy 4: Teacher Performance, Remuneration and Incentives

Policy 5: Improved School and Student Performance Monitoring

Policies 1 and 5 under Pillar 2 are most relevant to this paper. Implementation actions under each policy are listed below:

### **Policy 1: Curriculum Reform and Instructional Materials Provision**

- 2.11 Introduce a curriculum policy and strategy with increased instructional hours
- 2.12 Equitable access to essential textbooks and complementary instructional materials
- 2.13 One-off central procurement of textbooks/instructional materials
- 2.14 New education and training standards for vocational and technical education syllabi, including new labor-market-oriented curriculum programs
- 2.15 Block grant funding for book replacement
- 2.16 Non-formal education curriculum

Overall targets for this policy include 'One textbook per student per subject for primary students Grade 1 to secondary Grade 9 by 2015 starting from 2010 and refill with school block grants in

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<sup>14</sup> Ibid.

2010. Curriculum from K-12 must be completed by 2012. The key government stakeholders responsible for implementing these actions include Strategy Research and Educational Analysis Centre (SREAC), Curriculum Development Centre, Department of Higher Education (DHE), Educational Standards and Quality Assurance Centre (ESQAC), Department of Finance (DOF), Research Institute for Educational Sciences (RIES), Department of Technical Vocational and Educational Training (DTVET) and Department of Non-Formal Education (DNFE).

### **Policy 5: Improved School and Student Performance Monitoring**

- 251 Defined minimum standards of achievement for Grades 3, 5 and 9, and socialize standards to teachers, parents and stakeholders
- 252 New institutional arrangements for nationwide student performance monitoring requirements to improve learning outcomes and employment opportunities
- 253 More efficient school performance monitoring, planning and management.
- 254 Redefinition of the role of inspection services at all levels
- 255 Introduction of performance measures for education staff at all levels

The key government stakeholders responsible for implementation of these actions under Policy 5 are ESQAC, Department of Planning (DOP) and Department of Energy Business (DEB). The work plan also provides targets against these implementation actions and legislative requirements, if any.

One potential limitation of the ESDP is the lack of risks as barriers to achieving objectives and mitigation strategies. This could be indicative of a lack of detailed planning regarding the process for achievement of objectives.

### **Millennium Development Goals**

Lao PDR is part of the United Nations Development Programme and a member of the Association of Southeast Asian Nations (ASEAN). As a signatory to the Millennium Declaration, Lao PDR has committed to Millennium Development Goals (MDG) with specific, quantitative targets for action by 2015. Table 3 identifies the eight MDGs.<sup>15</sup>

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<sup>15</sup> <http://www.un.org/millenniumgoals/>

**Table 3: Millennium Development Goals**

Goal 1	Eradicate extreme poverty and hunger
Goal 2	Achieve universal primary education
Goal 3	Promote gender equality and empower women
Goal 4	Reduce child mortality
Goal 5	Improve maternal health
Goal 6	Combat HIV/AIDS, malaria and other diseases
Goal 7	Ensure environmental sustainability
Goal 8	Develop a global partnership for development

While it is acknowledged that progress across all of the MDGs is interconnected, Goal 2 is most relevant to this paper.

### **Education for All**

MDG 2 is supported through Education for All initiatives that focus on six key goals<sup>16</sup>:

**Goal 1:** Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.

**Goal 2:** Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to, and complete, free and compulsory primary education of good quality.

**Goal 3:** Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programs.

**Goal 4:** Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.

**Goal 5:** Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.

**Goal 6:** Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

UNESCO's Education for All global monitoring report in 2014 outlined areas of commendable progress. Lao PDR was noted in the top three performers between 2006 and 2011 in reducing their out-of-school populations by at least 85%. Lao PDR was also identified as having a high

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<sup>16</sup> <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/>

likelihood of achieving a primary enrollment target of at least 95% by 2015 and being on track to achieving gender parity in primary education (greater than 95%) by 2015.<sup>17</sup>

While net enrollment rates have increased from 89.2% in 2007/08 to 95.2% in 2011/12, high rates of Grade 1 drop out and repetition (one in ten children in Lao PDR dropped out at Grade 1 and one in five repeated in 2011/12), and low survival rates to Grade 5 (70% in 2011/12) are undermining Lao PDR's entry-level enrollment achievements.

While steady progress has been made, more needs to be accomplished to achieve MDG 2, reach the critical EFA targets and attain the national objective of surpassing the status of Least Developed Country by 2020.

### **ESDP progress against targets**

The *Education Sector Development Plan 2011–2015 Review and Update Final Report 2013* provides details on the progress of the plan at the mid-term. It found that at a national level, Lao PDR was on track to achieve MDG 2 (Universal Primary Education). However the survival rate to Grade 5 was off track. In addition, it identifies three provinces where targets set for net enrollment rates might not be achieved by 2015. It is important to note that Vientiane Capital was the only province projected to reach the 95% target, indicating a strong urban-rural disparity in education access.

Regarding MDG 3, gender parity was on track for achievement in 2015 at the early childhood and primary school level but off track at the higher levels of education. Gender inequity is higher in certain rural ethnic provinces.

No improvement was recorded in addressing the high attrition rates in Grade 1. Causes for this phenomenon were cited as families requiring children for work at certain times of the agricultural cycle and the distance to school making attendance difficult or impossible. Other potential causes were listed as low levels of school readiness, incomplete schools and the use of multi-grade classes.

### **Policy 1: Curriculum Reform and Instructional Materials Provision**

Under Pillar 2, Policy 1 (Curriculum Reform and Instructional Materials Provision) of the ESDP, three of the six implementation actions were on track or completed with the remaining three incomplete or off track as shown in Table 4:<sup>18</sup>

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<sup>17</sup> UNESCO, 2014

<sup>18</sup> MOES, 2013, pp. 40–41

**Table 4: ESDP Plan Pillar 2, Policy 1 Implementation actions and progress**

ESDF PILLAR 2: Improve Quality and Relevance Policy 1: Curriculum Reform and Instructional Materials Provision		Status at mid-term review	2015 target	Comment
2.1.1	Introduce a curriculum policy and strategy with increased instructional hours	Partially working No progress on increasing instructional hours	Retain and ensure compliance	LSE curriculum implementation efficiency improved by each teacher teaching two subjects. No local capacity to localize primary curriculum to 20% allowed. Establish new faculty and introduce new courses for higher education to catch up with the economic growth and private needs.
2.1.2	Equitable access to essential textbooks and complementary instructional materials	Off track at primary level	Retain	Replenishment budget for textbooks insufficient. Some use of school grants to buy instructional materials. More focus required on teachers' ability to use Teacher Guides, adapt to local context and make own resources.
2.1.3	One-off central procurement of textbooks/instructional materials	Not completed (prior to 2011)	Retain	Replenishment of textbooks/ instructional materials should be linked to use of school block grants.

**Table 4 (continued)**

ESDF PILLAR 2: Improve Quality and Relevance Policy 1: Curriculum Reform and Instructional Materials Provision		Status at mid-term review	2015 target	Comment
2.1.4	New education and training standards for vocational and technical education syllabi, including new labor-market-oriented curriculum programs	On track but labor-market orientation lagging	Retain target for 2015	Labor market connection in all education sectors needs more emphasis.
2.1.5	Block grant funding for book replacement	Off track (school block grant needs to match 100, 000 kip target)	Retain	Include in the school block grants once the target value of 100, 000 kip is achieved. Should be monitored by DESB/PESS.
2.1.6	Non-formal education curriculum	Completed	Review mobile teacher curriculum after first tranche of learners have completed three-year course	Pilot in process.

Analysis of achievements under Policy 1 describes the value of school block grants in procuring additional teaching and learning materials. However, progress against this policy action plan appears constrained by previous work undertaken. Whilst the curriculum was reformed prior to the ESDP, the number of instructional hours has not increased. The curriculum has been described as ‘crowded’; covering the full content is not possible, resulting in rote teaching and learning practices. In addition, teachers do not understand how to organize their teaching and learning around student-led learning principles.<sup>19</sup> These are key challenges concerning this assignment.

<sup>19</sup> MOES, 2013, pp. 27–28

## Policy 5: Improved School and Student Performance Monitoring

Under Pillar 2, Policy 5 of the ESDP (Improved School and Student Performance Monitoring) only one of the five implementation actions was on track for completion at the mid-term as per Table 5 below.<sup>20</sup>

**Table 5: ESDP Pillar 2, Policy 5 Implementation actions and progress**

ESDF PILLAR 2: Improve Quality and Relevance Policy 5: Improved School and Student Performance Monitoring		Status at mid-term review	2015 target	Comment
2.5.1	Defined minimum standards of achievement for Grades 3, 5 and 9, and socialize standards to teachers, parents and stakeholders	On track	Not yet defined	National quality standards are defined but strategies for school improvement planning should be further strengthened to enable schools to be able to work towards achieving these standards. National standards for learning are not yet defined.
2.5.2	New institutional arrangements for nationwide student performance monitoring	Off track	Retain	ASLO results are not informing policy. Resources are required to strengthen school performance monitoring.
2.5.3	More efficient school performance monitoring, planning and management	Implementation is off track	Retain as essential for quality assurance purposes	Operation budget at district level should be increased to further improve monitoring.
2.5.4	Redefinition of the role of inspection services at all levels	Implementation is off track	Retain as essential for quality assurance purposes	Further technical assistance is required to strengthen inspection capacity at all levels.
2.5.5	Introduction of performance measures for education staff at all levels	Code of Conduct in preparation but instrument to identify under-performing education is yet to be developed	Retain target for 2015	The draft Decree on Standards and Implementation of the Civil Servant Teacher Performance Monitoring and Evaluation should include measurable and unambiguous criteria for identification of under-performing teachers and administrative staff.

<sup>20</sup> MOES, 2013, p. 45



Achievements under Pillar 2, Policy 5 were described as the development of three instruments to measure learning outcomes: Assessment of Learning Outcomes (ASLO) Grade 3 and Grade 5 and Early Grade Reading Assessment (EGRA). These instruments are time intensive to administer and employ a sample-based approach. The ESDP review report notes that the ASLO Grade 3 report identifies causal relationships between student learning outcomes and a range of teacher, student, school and family characteristics.

However it is unclear how or if these findings will be used to support policy or strategy development to improve student learning outcomes.

The progress of implementation actions to institutionalize and improve student performance monitoring across the system (objectives 2.5.2 to 2.5.5 in Table 5 above) was hampered by lack of resources and operational budget to implement actions. The recent restructure of MOES could also have potentially delayed progress here.

## 4. PEDAGOGY

This chapter broadly addresses the scope of the review in relation to the relevance and appropriateness of existing student learning outcomes and the overall objective of enhancing curriculum developers' knowledge of student learning outcomes and their use in the context of teaching pedagogies in Lao PDR.

*The quality of learning is as fundamental as physical access to schools in achieving universal participation in education. While a quality curriculum is critical to education reform and improved learning, it is but one key area within a comprehensive and balanced strategy. A clearly defined curriculum needs to be well taught and accurately assessed by well-trained teachers who are provided with ongoing support and training. In addition, teachers require a deep understanding of culturally appropriate teaching strategies that engage learners and stimulate learning as well as access to sufficient and appropriate teaching resources.<sup>21</sup>*

In the 2013 Final Report of the Education Sector Development Plan,<sup>22</sup> the MOES identified several concerns about primary education in Lao PDR.

- The curriculum is overcrowded so teachers resort to rote learning.
- Most teachers need to deepen their understanding of how children learn and broaden their repertoire of teaching approaches.
- The curriculum should provide additional time for ethnic group children to become confident in speaking and understanding basic Lao language before they embark on the complex task of reading.
- Teachers are not adequately trained to manage multi-age classes.
- Schools and teachers do not know how to adapt the curriculum to incorporate 20% local curriculum.
- There is a critical shortage of textbooks, especially in rural areas.
- There is a lack of basic materials and visual aids in many schools.

Rote learning has been recognized by MOES to be an inappropriate teaching methodology. MOES has made a commitment to make a greater effort to develop student-centered skills and competencies. This change will happen gradually as new teachers are trained in student-centered methods of teaching and training programs are provided to support established teachers to change their approaches. There is also the challenge of implementing student-centered learning in schools with limited resources.

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<sup>21</sup> UNESCO, 2000, pp. 15–17

<sup>22</sup> MOES, 2013

*No doubt, there is a variety of factors affecting the pace of change to student-centered teaching and learning within Laos. For example, some teachers may be reluctant to change because in their view student-centered teaching will reduce student respect for the teacher. This issue is a reflection of the tension that arises when there is a change in a society of a cultural dimension. In the rural areas especially, the lack of educational resources and the large number of students in classes makes it more difficult for teachers to develop student-centered learning activities.*

*As the geography teacher in the rural secondary school pointed out, with no resources and with sixty students in his class, he had no choice but to use a teacher-centered teaching style:*

*“Teaching materials are insufficient... I am provided only with the textbook. I have to find supplementary material by myself. I must look very hard for collecting information for my class. That’s why I use one book... I try to collect information to present to my students. My students have no supplementary material to read. That’s why I have to present the lesson. Students only listen. They have no material, and no activity. That is why I use the teacher-centered style and prefer to talk.”<sup>23</sup>*

Student-centered learning means teaching for understanding. It is a very different way of teaching from rote learning. The job of the teacher is to teach both the content and the underlying conceptual understanding and to confirm that the student has understood the key concepts. Using assessment data to inform future learning plans is integral to a student-centered approach to learning. It is essential that the teacher also provides opportunities for students to apply their skills and knowledge. It is not sufficient to simply copy what the teacher does. The teacher gradually builds on students’ understanding by teaching more challenging concepts and content as the student has demonstrated mastery of more basic material.

The current Lao primary curriculum incorporates many of the key content ideas that are considered to be international best practices in Language, Mathematics and the World Around Us.

A curriculum is an outline of what needs to be taught. The focus on content or cognitive processes in the curriculum indicates what kind of teaching pedagogies are more likely to suit that particular curriculum. That is, a curriculum that frequently uses verbs such as examine, manipulate, apply, investigate and critically reflect in the student learning outcomes, is giving clear messages that it will require a teaching pedagogy focused on understanding.

The extent to which a curriculum focuses on content or conceptual understandings also indicates what kind of teaching pedagogies might suit that curriculum. A curriculum that is focused on understanding identifies key concepts that students need to master and highlights the

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<sup>23</sup> Dornier & Gorman, 2011, p. 14

importance of students learning to understand and apply these concepts as well as describing suitable content that students need to learn.

A curriculum that is focused on understanding recognizes key concepts that students may take some time to master and allows sufficient time and repeated revision opportunities to ensure students grasp these key ideas. The curriculum does not try to cover too much content too quickly if understanding is the aim.

A curriculum that is student-centered and focused on understanding begins with descriptions at the level of the least proficient students who might be starting school. The curriculum describes the earliest concepts and understanding that these students might need to develop. The curriculum supports teachers to be able to teach these students how to understand the basic concepts they have not yet grasped. The curriculum describes a clear continuum of development so teachers understand where students are in their learning pathway now and what they need to learn next in order to improve.

A student-centered curriculum has to be flexible, as students start school with very different levels of knowledge and understanding. Some students do not need to start at the very beginning of the curriculum. They already know these skills and are ready to learn more advanced skills. Teachers in a student-centered school need to be able to cater for the wide range of student abilities in their class by providing activities of different levels of challenge to groups of students with different learning needs.

### **Lao primary curriculum**

The Lao primary curriculum reflects much of the content of international best practices in curriculum design, but it could include more features that clearly align it with a student-centered pedagogy that is focused on developing students' understanding. For example, the Lao Mathematics curriculum does not describe key concepts that underpin early development of mathematical understanding such as one-to-one correspondence, conservation of number, and place value. The Grade 1 basic learning competencies cover content much more quickly than do many other countries with high levels of numeracy. In the following section the Lao Reading curriculum is compared with a model of early reading instruction that is focused on understanding.

### **Lao Reading curriculum**

Table 6 shows the Lao primary curriculum basic learning competencies for reading that students are expected to demonstrate during their first year of school.

**Table 6: Lao primary curriculum Grade 1 Reading basic learning competencies**

Grade 1 Reading: Reading Texts	Skills and strategies
<ol style="list-style-type: none"> <li>1. Demonstrate knowledge that texts have meaning by trying to interpret the meaning</li> <li>2. Read short, predictable, well-illustrated texts, including:               <ul style="list-style-type: none"> <li>– with repetitive elements in the text</li> <li>– about familiar topics</li> <li>– narratives, recounts, descriptions, poems and instructions</li> </ul> </li> <li>3. Read texts purposefully to use the information, including:               <ul style="list-style-type: none"> <li>– do classroom activities based on the meaning or the information given in the text</li> </ul> </li> <li>4. Identify basic structure and features of texts, including:               <ul style="list-style-type: none"> <li>– front cover, headings, reading left to right and top to bottom, front to back, illustrations, sentences</li> <li>– the ways different types of texts begin (with teacher support)</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Use prediction of meaning and knowledge of letters and their sounds to read, including:               <ul style="list-style-type: none"> <li>– read familiar words and sentences</li> <li>– predict what the story is about from the front cover illustration</li> <li>– predict using picture cues (ideas indicated by the picture) and knowledge of word shape</li> </ul> </li> <li>2. Pronounce correctly when reading simple texts out loud, including:               <ul style="list-style-type: none"> <li>– with appropriate loudness</li> <li>– respond to high and low consonants, short and long vowels, tones</li> </ul> </li> <li>3. Use strategies to make reading easy and enjoyable, including:               <ul style="list-style-type: none"> <li>– select appropriate texts for age and for purpose</li> <li>– position text about 30 cm from eyes</li> </ul> </li> <li>4. Summarize what has been read by retelling in own words</li> </ol>

It can be seen from this table that the Grade 1 Lao Reading basic learning competencies begin with students already reading and immediately move to focusing on different text types, and reading texts purposefully for information. There is also very little differentiation between the basic learning competencies for reading from Grade 1 to Grade 5. The competencies mainly focus on external features of reading, such as text types and text structures of an increasing variety. Reading and writing are treated as separate skills with little connection.

The basic learning competencies for Grade 1 Reading are skills and understandings that countries with high levels of literacy expect students, many of whom come from rich literacy home backgrounds, to take two or three years to develop with intensive daily instruction of at least one hour in reading and writing and well-resourced classrooms. The Lao expectations for Grade 1 reading are very high and may exclude some students from learning to read because the starting point is too high. A curriculum that begins at a lower level of skill and supports teachers to build on a sound foundation of knowledge as they develop students’ reading skills is more likely to support all students to ultimately high levels of achievement than a curriculum that excludes them at the start because it is too hard.

## Conceptual understanding model of reading

This model is based on the premise that students need to understand in order to learn. Many students in Lao PDR come to school from environments where there is little or no print. They have limited understanding of what reading and writing are meant to do. They may have not yet learned how to interpret texts, even when the text is read to them. They may not have developed the sensitivity to the sounds in words that is the basis for understanding how sounds in words are matched with symbols. They may also find it difficult to see any point in trying to learn all the complexities of matching sounds to Lao print unless the purpose and enjoyment of reading is made clear to them.

Learning outcomes in a curriculum that is focused on understanding reading would describe a continuum in the development of these skills and understandings beginning with basic understandings about texts, listening to and talking about meaningful texts and learning to hear sounds in words and gradually building up to students matching sounds in words to letters or syllables, starting to read simple illustrated texts with a few familiar words aloud by themselves, and starting to write short meaningful communications. After a couple of years focused on developing early reading comprehension and decoding skills, the curriculum would increasingly focus on developing a wide range of comprehension strategies by teaching students how to interpret explicit and implicit ideas and how to critically reflect on increasingly complex texts. The development of reading comprehension skills would be expected to continue over the whole of the students' years at school.

Learning outcomes in a curriculum that is focused on understanding would integrate reading and writing. The development of writing skills that are focused on students communicating personal ideas of value to them is closely related to the development of independent reading skills as writing allows students to explore the relationships between sounds and symbols and to understand the fundamental purpose of text is to convey meaning.

The implementation of learning outcomes focused on reading and writing with understanding is also likely to require extensive teacher resources. An excellent curriculum is not sufficient on its own. Countries with high literacy rates invest heavily in reading programs, books, teaching resources and teacher training to support teachers.

## Lao and English

When students start to learn to read, they need to learn how to decode the print as well as how to understand it. The Lao Reading curriculum currently has few learning outcomes relating to this important early reading skill.

The Lao language has a completely different structure to English. Lao is an alpha-syllabic language. While the correspondence between graphemes and sound is reasonably regular, the contour tone diacritics and vowel combinations and vowel placements are highly complex. Also,

Lao does not allow for spaces between words within a sentence. There are only spaces between sentences. It is likely that students will take several years or more to master a complex script such as Lao.

Effective strategies for teaching students to successfully decode Lao are likely to be very different from effective strategies for teaching English. Careful research is required here with linguists and skilled, effective reading teachers working together to identify how to best teach students to decode Lao and to subsequently develop appropriate learning outcomes and teaching materials for decoding.

### Teachers need to understand new approaches

Experienced Lao teachers need to be supported to understand why a rote model of learning is ineffective and why they need to change. They need to be convinced that a model of learning based on understanding is more effective for achievement of high standards than a rote learning model. Teachers may resist changes when they do not recognize or understand how such unfamiliar ideas are related to what they have been trained to do and what they understand teaching to be. This is indicated in the findings of two recent research studies in Lao.

*Teachers understand active learning as the Five-Star teaching method which includes several activities, the group working, question topics, using materials and matching lessons with the real life environment. The most important factor causing low performance on active learning is that teachers could not comprehend the meaning or philosophy of active learning; they just remember the formats or patterns of implementation.<sup>24</sup>*

*The typical Lao classroom appears to be strongly structured through lesson-planning and instructional time. In principle, teachers place great emphasis on thinking skills and problem solving. In practice, the primary method of instruction in Lao PDR schools is frontal lecturing, copying lessons on the blackboard and encouraging recitation and memorization. Students are mostly passive recipients of instruction. While there is some opportunity for copying exercises, there is comparatively little time devoted to practical exercises or application of knowledge.<sup>25</sup>*

The lack of sustainability of programs that teachers fundamentally do not understand is inevitable.

*Lao PDR Australia Basic Education Project (LABEP–1999–2007) mainly focused the assistance in the areas of ethnic teacher education, supplementary curriculum development, teaching materials for the needs of ethnic children, teachers’ guides on the use of training materials, training pedagogical advisors, and on-site advice to, and supervision of, teachers. However, according to the evaluation of the project, supplementary materials, teachers guides and*

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<sup>24</sup> ESQAC, 2011, p. 31

<sup>25</sup> Benveniste, Marshall & Santibanez, 2007, pp. xi- xii

*teacher learning kits are no longer used in schools due to the lack of continuous training and lack of replenishment of the materials.*<sup>26</sup>

### **Lao reality**

All teachers, including highly experienced teachers in countries with high rates of literacy and numeracy, need extensive, detailed teaching guides, lesson plans, resources, textbooks and training to help them translate the curriculum into daily classroom activities. This highlights the key role that the Teacher Guides and textbooks play in the implementation of the Lao primary curriculum. Currently the Teacher Guides and textbooks are the only support many teachers have, making it critical that the Guides and textbooks accurately reflect the curriculum intentions in terms of the kinds of lesson plans that are provided and whether the focus is on memorization of content or understanding.

The Teacher Guides and textbooks need to transform the learning outcomes in the curriculum into the kinds of effective teaching activities that are most likely to promote learning. Teachers trust that other people with more expertise than themselves have provided the best possible, practical interpretation of the curriculum learning outcomes in the Teacher Guides and textbooks. Teachers rely heavily on the Teacher Guides and textbooks and follow them closely as they expect to be accountable for delivering the curriculum and these documents are their curriculum.

### **Which pedagogy?**

Student-centered learning is a very broad term that includes both structured teaching and discovery-based learning. It is possible to teach for understanding with a model that is at times teacher-centered and at times student-centered. This is often known as structured teaching. This section compares traditional or rote teaching with structured teaching and discovery-based teaching. It would be helpful if the curriculum described in more detail the pedagogical approach that is preferred in Lao PDR.

Over the past few decades, a growing body of pedagogical research has consistently demonstrated that teachers have a significant impact on how well students learn and achieve. Researchers have closely investigated which teaching practices are most effective in assisting students to learn and achieve core learning outcomes. Teaching methodologies can be grouped into the following broad categories:

- traditional
- structured
- discovery-based

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<sup>26</sup> MOES, 2014, p. 44



Traditional teaching is an essentially expository form of teaching. Lessons are dominated by the teacher. Students are assigned more passive roles through listening and following directions.

Classroom activities emphasize reciting and remembering, lower order skills that involve recalling, listing, naming, locating and describing.<sup>27</sup>

Structured teaching follows a systematic and structured teaching sequence. Lessons include a review of prior learning, presentation of new learning, modeling by the teacher, sufficient guided and supported practice for students to learn, the use of feedback and further independent practice. Structured lessons are clear, task orientated, flexible and engaging.<sup>28</sup>

Discovery-based teaching is a highly interactive teaching methodology in which student knowledge is built and guided through investigation, discovery and solving problems.

Of the three methodologies described above, structured teaching is consistently identified as the most effective and efficient sequence of teaching practices for the majority of students, in particular those requiring additional support with their learning including those from disadvantaged backgrounds.<sup>29</sup>

*... careful sequencing, monitoring and control of the learning process raises the learning rate ... Ensuring that students achieve mastery of initial steps in the sequence helps ensure that they will make satisfactory progress in subsequent, more advanced steps. Frequent assessment of progress informs teachers and students when additional time and corrective remedies are needed.*<sup>30</sup>

Table 7 provides an overview of some key principles that support effective teaching and learning.<sup>31</sup> The column in the middle highlights examples of activities consistent with the principles that, ideally, would be evident in Teacher Guides to support learning. The final column provides an overview of activities that are commonly included in Teacher Guides for the three core subjects: Mathematics, Lao Language and World Around Us.

Ultimately, the real measure of whether any lesson is effective lies not in its delivery but with the evidence of actual student learning. Successful teaching must be measured by gains in student learning and achievement. The success of an education system, in turn, must be measured by what each of its students knows, understands and can do.

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<sup>27</sup> Gauthier & Dembélé, 2005; Krathwohl, 2002

<sup>28</sup> Walberg & Paik, 2009

<sup>29</sup> Gauthier & Dembélé, 2005; Walberg & Paik, 2009

<sup>30</sup> Walberg & Paik, 2009, p.17

<sup>31</sup> Vosniadou, 2000

**Table 7: Principles and activities that support effective teaching and learning**

Principles	Activities to support key principles	Actual activities in Teacher Guides
<ul style="list-style-type: none"> <li>• Students are actively involved in learning</li> <li>• Activities are meaningful and culturally relevant</li> <li>• New knowledge is constructed on the basis of what is already understood</li> <li>• Students are taught how to plan and monitor their learning and how to set their own learning goals</li> <li>• Students are taught a range of strategies to support thinking, remembering and problem solving</li> <li>• Learning is organized around general principles and explanations rather than isolated facts and procedures</li> <li>• Considerable time and practice enables students to build mastery</li> </ul>	<ul style="list-style-type: none"> <li>• Small, brief teaching episodes of no more than six minutes’ duration</li> <li>• Extensive use of hands-on activities and opportunities to solve problems and explore and investigate</li> <li>• A wide range of materials, activities and learning tasks across all subjects</li> <li>• Frequent opportunities for classroom discussions</li> <li>• Real-life contexts to support student learning</li> <li>• Local cultures reflected in common activities</li> <li>• Previous learning reviewed at the start of lessons</li> <li>• Learning in one subject applied in other areas</li> <li>• Frequent opportunities for feedback to students</li> <li>• Sufficient time to learn and understand new concepts</li> <li>• Opportunities for deliberate practice such as active thinking and monitoring of learning</li> <li>• Range of strategies students need to learn independently e.g. underlining key words, drawing diagrams to plan a project, planning an experiment</li> <li>• Opportunities to solve ‘typical’ problems, increasing in difficulty as students acquire greater expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Significant reliance on teacher talk</li> <li>• The majority of questions asked by teachers are low level (refer Bloom’s Revised Taxonomy)*</li> <li>• Students answer teacher questions using lower level responses (refer Bloom’s Revised Taxonomy)</li> <li>• Students point to objects – real life and pictures in textbooks</li> <li>• Students work in groups to look at pictures and answer questions based on textbooks</li> <li>• Students work in pairs e.g. to develop word lists, complete activities</li> <li>• Students complete textbook activities</li> <li>• Teachers model actions, students copy actions</li> <li>• Some hands on activities included e.g. sort and describe objects and shapes</li> <li>• Practice for accuracy e.g. number facts, pronunciation, writing neatly</li> <li>• Select and draw pictures</li> <li>• Distinguish between correct and incorrect responses</li> </ul>

\*See Krathwohl, 2002

## 5. STUDENT LEARNING OUTCOMES AND ASSESSMENT DATA

This chapter broadly addresses the scope of the review in relation to the relevance and appropriateness of existing student learning outcomes and the overall objective of enhancing curriculum developers' knowledge of student learning outcomes and their use in the context of national student assessment data.

### Reading assessment data

*An Early Grade Reading Assessment showed that over 30% of 2nd graders could not read a single word, and among those who could read, 57% did not understand what they had just read. In an adult literacy assessment carried out in six countries around the world—including Vietnam, Yunnan Province (China), and Lao PDR—adults in Lao had the poorest literacy skills among the adults tested. Post-secondary graduates in Lao PDR performed almost on par with people with only primary schooling in Vietnam. Given how important reading ability is for learning more advanced skills, the low level of basic literacy has serious implications for the country's productivity, growth, and competitiveness.<sup>32</sup>*

Figure 2 shows the percentage of students scoring zero in fluency and comprehension in Grades 2, 3 and 4 on the EGRA test administered in 2012. It is heartening to note that this figure does decrease substantially from Grade 2 to Grade 4. Nonetheless, 14% of students with zero scores for comprehension in Grade 4 are still a concern.

**Figure 2: Early Grade Reading Assessment for Lao PDR**



<sup>32</sup> World Bank, 2014, p.12

National assessments of student learning (ASLO) have been conducted with a random sample of students in Lao PDR since 2006. ASLO is conducted by RIES. In 2006 and 2009 it was conducted with Grade 5 students and in 2011, it was conducted with Grade 3 students.

*Outcomes (ASLO) 2009 found 72% of all Grade 5 students across the nation were assessed as 'pre-functional' in Mathematics. Overall comparison of results from 2006 to 2009 showed no real improvement over time. Similarly, preliminary findings from an Early Grade Reading Assessment (ERGRA) conducted in 2012 indicate that the average student in Grades 2 to 4 has poor reading ability.<sup>33</sup>*

The *Report Assessment of Student Learning Outcomes (ASLO III)*<sup>34</sup> provides a detailed analysis of the 2011 Grade 3 test administration. The report is extremely useful in its analysis of the different levels of student achievement across different provinces and the analysis of the impact of background variables. However, the way the data are reported makes it difficult to use in order to inform the revision and improvement of the curriculum. More detailed information about the test items would help to identify what is actually being assessed and allow for deeper investigations of the data.

The Lao Language data are reported as the combined score from a test of 41 items that includes 13 Speaking and Listening items, 12 Reading items and 16 Writing items. The items have been assigned to levels from 1 to 6. A very brief description of the items in each level is the only clue about the skills being assessed. These descriptions suggest that of the 12 Reading questions there may be as few as five questions that require students to silently read and interpret the meaning of what they have read (questions 11, 13, 16, 17 and 18) and two that require understanding of a text that is read to them (12, 14). Items requiring students to remember words from a story that is read to them (8, 9, 15) seem to be addressing listening skills rather than comprehension and items analyzing the meaning of words (10, 19) may be more related to vocabulary knowledge than reading, depending on the way the item is designed. Seven out of 41 questions cannot provide an accurate indication of students' reading skills.

The Writing items are mainly concerned with the technical skills of writing: spelling, grammar, parts of speech and punctuation. There seem to be only three items that concern generating writing and these are confined to generating a single word. It would seem that there are no items in the Grade 3 ASLO Writing that require the student to generate even one sentence of original writing.

The Lao Language assessment seems to be a measure of speaking, listening and technical skills of writing rather than of students' ability to read for meaning or writing meaningfully.

There also seem to be problems with the described scale. It is important to note here that it is only the descriptions of the scale that seem to be problematic. The data and the excellent analysis

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<sup>33</sup> Hudson & Bennett, 2014, p. 8

<sup>34</sup> RIES, 2014

that constitute most of the report are not being called into question. The Lao Language student achievement is reported against a described scale of six levels as shown in Figure 3. The proportion of students with scores in each level is identified.<sup>35</sup>

**Figure 3: ASLO III described scale for Lao Language**

Level	Level descriptor	%	Standard error
1	Student can remember a simple and short word and phrase; tell the name of close people; remember simple and short words, phrases and sentences from a story; spell simple and short words read aloud by the teacher.	1.61	0.28
2	Student can interpret the meaning of the words from the listening exercise; use the right words at the appropriate time; interpret words and sentences from stories; create new vivid words.	15.03	1.11
3	Student can use words and passages from the listening exercise, report their experience to others; create new vivid words and new meaningful sentences.	32.21	1.20
4	Student can analyze words, sentences and passages from the listening exercise; express their opinion and ideas; analyze words, sentences and passages from the reading exercise; analyze and distribute words in the sentence (word order).	27.12	1.09
5	Student can analyze the sentences from the listening exercise; speak at the appropriate time and to the appropriate people (tactful speaking); analyze sentences and passages from the reading exercise; analyze words and elaborate written responses.	19.30	1.10
6	Student can analyze content from the listening exercise; speak to persuade others or make requests; analyze important parts of speech from the reading exercises; analyze important parts of speech by demonstrating appropriate use of punctuation.	4.73	0.70

The ASLO III data are scaled. Descriptions of scales are based on the relative difficulty of the items at different points on the scale. Therefore, the lowest level of the described scale should describe the kinds of skills addressed by the very easiest items at the bottom of the scale. The next level up describes the skills addressed by slightly harder items going all the way up to the highest level of the scale which should describe the kinds of skills addressed by the hardest items. The appendices of the ASLO III Report provide the logit values for the items. The logit values identify the location of each of the items on the scale.

The higher the logit value the higher the location on the scale. Investigation of the data available in the report suggests there is a mismatch between the descriptions of the levels and the actual

<sup>35</sup> RIES, 2014

difficulty of the items. Table 8 shows the ASLO III Reading items arranged by their logit difficulty, that is, their actual location on the scale. The hardest items are at the top.

**Table 8: ASLO III Reading items arranged by logit difficulty**

Reading question	Logit	Assigned level
14	0.867	2
13	0.454	4
16	0.189	5
15	0.111	1
18	-0.075	6
17	-0.233	5
12	-0.29	2
19	-0.376	3
11	-0.51	4
8	-0.539	1
10	-0.708	3
9	-0.877	1

The most difficult reading item (question 14) is Level 2, the next most difficult reading question (question 13) is Level 4. Working down the order of difficulty, question 16 is Level 5 and question 15, the fourth hardest in the test, is Level 1. The actual difficulty of some of the items considered to represent Level 1 and Level 2 skills may indicate basic skills and understandings that students have not understood and that need more time and teaching attention.

Writing also shows misalignment between the assigned levels and the actual difficulty of the items. In this case all the items in Level 5 are the most difficult. Three of the Level 6 items are actually among the easiest in the writing test and the other two Level 6 items are easier than the two Level 3 items as shown in Table 9.

**Table 9: ASLO III Writing items arranged by logit difficulty**

Writing question	Logit	Assigned level
31	2.609	5
30	2.525	5
29	2.479	5
28	2.316	5
27	1.36	3
26	1.27	3
32	1.101	6
33	1.126	6
22	0.991	4
25	0.717	2
24	0.685	4
23	0.686	4
21	0.014	6
35	-0.1	6
34	-0.268	6
20	-0.34	1

The hardest writing items are much harder than any of the reading items. The grey shading in Table 8 shows the writing items that are of comparable difficulty to the reading items. The items without shading are much harder. A description of the Lao Language scale that reflected the difficulty of the items would only describe writing in the top levels, as all the speaking and listening items are either of similar difficulty to the reading items or much easier.

The mismatch between the actual difficulty of the items and their assigned levels suggests the descriptions of the levels of the scale are problematic. It also suggests that some of the items are not assessing the skills they were intended to assess.

Two benchmark levels are reported that divide students into three groups: pre-functional, functional and independent. The location of these benchmarks as logit values on the scale is not identified. Given that the descriptions in the scale are problematic, the assumptions made in the benchmark levels about what students can and cannot do are also likely to be problematic.

A study conducted in Bolikhamxay and Attapeu provinces with Grade 2 students in 2013 reported separately on the reading skills of students.<sup>36</sup> The findings of this study were that only 4% of students in Bolikhamxay and 9% of students in Attapeu were able to read a passage aloud independently. If students could not read the passage themselves, it was read to them. They were then asked eight comprehension questions. On average students were only able to answer between one and three questions correctly. As successful reading requires both the ability to read fluently aloud and the capacity to understand what has been read, 95% of all the students

<sup>36</sup> Pisani, et al., 2013

in the study were classified as non-readers. Most students were still developing their decoding skills. On average they could identify between nine and 13 out of 18 letters, but they could only decode one or two of the 20 nonsense words they were shown.

These results are quite different to the ASLO III reported data for Grade 3 for these provinces shown in Table 10.

**Table 10: ASLO III data for two provinces by described level**

Level	1	2	3	4	5	6
Bolikhambxay	3 %	18 %	27 %	25 %	21 %	6 %
Attapeu	2 %	6 %	33 %	32 %	25 %	3 %

The ASLO III data do reflect the higher overall performance of Attapeu students compared with Bolikhambxay students that is also shown in the Save the Children data, but there are stark variations between the results which highlight the difference between what each of the tests assesses. The Save the Children data are reported for a test of reading, but the ASLO III Language test is mainly a test of speaking, listening and technical skills of writing.

The ASLO III Speaking and Writing items are open and the Listening and Reading items are all multiple choice. Given how hard the writing tasks were for students and the low levels of reading skill suggested in the Save the Children Literacy Boost report, it is possible that unintended clues supported students to select the correct answers by matching symbols in the question to the text or by copying the correct words. The point bi-serials in the item statistics suggest that students were not guessing.

The ASLO III Mathematics test has 8 number items, 17 operations items, 10 geometry/data items and 5 measurement items. The described scale for Mathematics has the same problems of a mismatch between the assigned levels of difficulty of the items and their actual difficulty. Table 10 shows the hardest item, question 4, is classified as Level 2, as is question 3, the third-hardest item. Question 8, classified as Level 5, is actually the second easiest question.

**Table 11: ASLO III Number data in order of logit difficulty**

Mathematics Number question	Logit	Assigned level
4	0.543	2
7	0.448	4
3	0.335	2
2	0.255	1
5	0.074	3
6	-0.142	3
8	-0.644	5
1	-1.218	1



The ASLO III Operations data also show that two of the three hardest items in the set are Level 2. Questions 17, 18 and 19 appear to be partial credits for the same item. It seems odd, if this is the case, that the highest level of credit for this item (17.3) is Level 2, but the lower partial credit of 17.2 is Level 4 and the lowest level of credit, 17.1 is Level 2. Two of the three Level 5 items are easier than all the Level 2 and Level 3 items and two of the three Level 4 items.

**Table 12: ASLO III Operations data in order of logit difficulty**

Mathematics operations question	Logit	Assigned level
19 (17.3)	1.400	2
18 (17.2)	0.981	4
17 (17.1)	0.787	2
20	0.401	3
21	0.249	5
22	0.244	3
12	0.198	2
13	-0.099	2
14	-0.138	4
11	-0.167	1
10	-0.169	1
24	-0.187	5
23	-0.210	5
25	-0.319	6
16	-0.536	4
15	-0.645	1
9	-0.745	1

Again, this suggests that fundamental concepts which students ought to have learned earlier, and need in order to build their understanding of Mathematics, have not been allocated sufficient time in the curriculum or in teacher training and that most students do not understand them. These skills are still really hard.

In the 2013 final report of the ESDP,<sup>37</sup> the MOES identified several concerns about primary education in Lao PDR including that most teachers need to deepen their understanding of how children learn and broaden their repertoire of teaching approaches. The ASLO III data could provide useful information to support better understanding of how students learn and what they find difficult, but the data would need to be reinterpreted to better reflect the actual level of difficulty of the questions. The test itself would also need to be examined to ensure that it was

<sup>37</sup> MOES, 2013

assessing the intended skills and not unintentionally providing clues to students to help them to get the correct answer by copying or matching symbols.

### **Language**

MOES has identified as one of its concerns in the final report of the ESDP that the curriculum should provide additional time for ethnic-group children to become confident in speaking and understanding basic Lao before they begin the complex task of reading. The ASLO III data highlight the importance of providing extra time. There are consistent, large differences in the scores of non Lao-Tai students and Lao students, especially for Language. Many non Lao-Tai students do not speak Lao when they come to school and there are few provisions in the curriculum to ensure students develop sufficient proficiency in Lao before they commence the formal curriculum. The curriculum notes that non Lao-Tai students will need extra help and support, but there is no corresponding decrease in the content that the teacher is still expected to cover in Grade 1 in order to provide this extra help. The curriculum and the Teacher Guides and textbooks do not provide advice on how teachers might help.

A possible option to consider is providing a one-year Lao language proficiency course with its own curriculum that non Lao-Tai students complete before they start the Grade 1 curriculum. This would mean that non Lao-Tai students have similar access to education as the Lao-Tai students. From an educational perspective it is possibly preferable to have non Lao-Tai students speaking Lao proficiently when they enter Grade 1, even if they are one year older than Lao-Tai students, rather than struggling to try to learn Lao and master the curriculum at the same time.

### **Multi-grade classes**

It is widely acknowledged that teachers struggle to teach in multi-grade classrooms in Lao PDR. The ASLO III data show that there is a wide distribution of reading ability and Mathematics ability in a single grade level. That is, there are many students in Grade 3 who have not yet mastered almost any of the content that should have been learned in Grade 2. There is also a large number of students in Grade 3 who have not yet mastered the content that should have been learned in Grade 1. The ASLO II and ASLO I show the same pattern of a very wide distribution of ability in Grade 5. The ASLO III data show that every grade in Lao is a multi-ability class typically with extreme differences between the literacy and numeracy skills of the weakest and the most proficient students in the same grade.

In order to teach effectively, teachers already need to cater for at least three groups with completely different learning needs in their single grade class.

The differences in the overall achievements of students between one grade and the next are small. Student progress tends to be very small in the Lao education system. This means there is far greater difference between the weakest and most proficient students in a single grade than there are differences between the ranges of ability of students in adjacent grades.

The problem of teaching multi-grade classes in Lao PDR is created by the expectation that students in a particular grade must be taught the curriculum content for that grade regardless of whether they are ready to learn it or not. This creates the virtually impossible challenge for the teacher of trying to simultaneously deliver two or even three completely different lessons from different Teacher Guides and different textbooks to different students at the same time.

A possible solution could involve completely rethinking how schools are organized and how the curriculum is delivered.

In most primary schools it would be possible to create three ability based-groups for reading that transcended allocated grades. All teachers in the school would teach reading at the same time for one hour every day.

All students with no reading skills could go to the lowest level class for one hour reading teaching every day, regardless of whether they are in Grades 1, 2, 3, 4 or 5. This class would focus on the very basic skills of hearing sounds in words and learning about text that these students still have not learned. Once students have learned some letters and can recognize some words, they start the middle-level class.

All students who know some of the letters of Lao and can recognize and write some words would go to the next level of reading class for one hour of reading teaching every day regardless of which grade they are actually in. This class would focus on building these students' skills, making sure they know all the letters and learn to recognize and write a larger list of words as well as developing their understanding of printed text. As students are ready, they start attending the top-level class.

All students who are starting to read in Lao would go to the top-level reading class for one hour every day regardless of which grade they are in and be instructed in reading comprehension strategies and writing with short texts.

The same pattern could be followed for Mathematics. Students with no understanding of how to count or combine collections go to the lowest class, students who understand numbers up to 100 and simple addition, subtraction and multiplication go to a slightly higher level class and students who can understand more complex ideas in Mathematics go to the higher class. In each class students receive instruction that matches their current learning needs.

Students could return to their age-based grade level classes for all the rest of the subjects in the curriculum as it is also important that they spend extended time with their age-related peers.

## **Examinations**

Lao PDR has national examinations for lower and upper secondary students. It would help to inform the development of student learning outcomes if it was possible to investigate the relationship between the levels of student achievement on these examinations and student achievement in ASLO, especially between secondary Grade 8 and primary Grade 5.

### **School-based assessment**

Teacher Guides encourage teachers to regularly administer tests, score students' responses and provide extra help to students whose scores fall below a certain level. The focus is on the student having failed to reach the desired standard, rather than assessment data being used to identify if the student has fundamental misunderstandings and conceptual gaps that the teacher needs to address by modifying their teaching strategy. Constructive assessment feedback to students that identifies what they know and can do and what they need to learn next is also a highly effective teaching strategy. Teachers unfamiliar with this approach to using assessment data would require extensive support to understand how to do it effectively.

## 6. REVIEW OF PRIMARY CURRICULUM DOCUMENTS

This section addresses the scope of the review in relation to the student learning outcomes framework and the overall objective of identifying if the scope of the current competency framework is adequate for its intended purpose.

### Overview

Curriculum is about students being engaged in both structured and unstructured learning experiences that lay the foundations for ongoing learning and improving human life.<sup>38</sup> At a fundamental level curriculum represents the ‘what’ of teaching. In a recent UNESCO report on Curriculum in the 21st Century, school curriculum is defined as:

*... the essential skills, indispensable knowledge and most important values that must be acquired at school ... the fundamental learning experiences required to ensure that the new generations are prepared for life in the type of society that we aspire to build.*<sup>39</sup>

National curriculum plans describe what students should know, understand and be able to do as a result of attending school. They articulate the aims and structure for curriculum across a specified number of years of schooling and identify and sequence learning. National curriculum plans provide direction to the education community by highlighting key policies and requirements to ensure that students acquire core competencies, knowledge, skills, attitudes and values. While each nation will determine what is included in curriculum plans, a review of the literature<sup>40</sup> highlights the following general components:

- Overarching aims or goals for education to set the context for the curriculum.
- Guiding principles applied consistently across all subjects to enact the overarching aims.
- Essential competencies and skills required for successful lifelong learning to be taught and modeled across all subjects.
- The formal curriculum for core subjects to articulate the educational experiences schools and teachers must provide to students.
- Key policy advice for schools such as requirements for meeting the broad range of student learning needs, permitted adjustments to the mandated curriculum and legislated hours for instruction.

Well-structured subject curricula provide clear direction to school leaders and teachers about what learning is essential. They promote consistency, coherence and sequential learning across each grade, and inform the development of resources to support teaching, learning and assessment.

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<sup>38</sup> UNESCO, 2000

<sup>39</sup> Amadio, Operti & Tedesco, 2014, p.1

<sup>40</sup> Ibid.

When learning is clearly sequenced, teachers who teach a particular grade are able to see where their contributions to a child's learning and development sit in this learning progression. Teachers can cater more effectively to students in multi-grade classes and those requiring additional learning support or learning extension through ready access to a planned, developmental sequence of learning. They can support learners in making connections in their learning by linking what has been learned with what is being learned and what will be learned next. In addition, a well-sequenced curriculum assists teachers to plan with their colleagues their contributions to each learner's education.

Authorities responsible for renewing and refining school curricula are continually striving to improve the way that the content, purpose and organization of learning for each subject is communicated to better support teachers and teaching. A review of the literature<sup>41</sup> reveals a number of components that subject curricula have in common:

- A rationale to explain the importance of the subject and why students are learning what they are learning.
- Descriptions of the knowledge, skills, attitudes and values that students will develop by learning this subject.
- A clear structure to show how the learning is organized, usually in *strands* (areas of study) and *sub-strands* (smaller components of each strand).
- Descriptions of the subject-specific knowledge, understanding, skills, values and attitudes to be taught in a developmentally valid sequence of learning across each grade level. This typically involves three levels of information: (i) the standard of learning expected by the end of each grade, usually referred to as *achievement standards* or *student learning outcomes*; (ii) the content, which is typically referred to as *content descriptions* or *student learning outcomes* and organized by strands; and (iii) additional details to provide more clarity about the content, usually referred to as *professional elaborations* or *indicators*.
- Assessment to clarify expectations for assessing student learning and giving feedback to learners.

### Scope of review

The document titled Curriculum Primary Education represents Lao PDR's national curriculum for primary education. It was completed in 2007 and published in 2010.

Lao PDR's primary curriculum is constructed around three elements: formal curriculum, class and school activities, and extracurricular activities. Primary school study encompasses nine subjects: Lao Language

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<sup>41</sup> UNESCO, 2000

Mathematics  
Handicraft  
Moral Education  
World Around Us  
Physical Education  
Art  
Music  
English (introduced in Grade 3)

The desk review looked closely at the national plan as well as the curriculum for three core subjects: Mathematics, Lao Language and World Around Us. In this chapter of the review, the curriculum for these core subjects is compared with international best practice.

Teacher Guides (published in 2011) and student textbooks for Grade 1 in these three subjects were reviewed to ascertain how well they supported the enactment of the content of the curriculum. While all year levels were reviewed, Grade 1 was selected for particular focus as it is the starting point for formal schooling and therefore lays the foundation for future learning. A closer examination of the Grade 1 curriculum may provide further insight, in addition to factors noted in Table 2, into why school absenteeism and drop-out rates<sup>42</sup> in this grade are the highest in primary school.

In light of the complex economic and social challenges faced by Lao PDR and education's central role in shaping the nation's development, the review considered the extent to which the nation's formal curriculum supports high levels of literacy and numeracy attainment across all schools in all provinces.

It should be noted that the review relied on English translations of documents. It is possible that some interpretations of meaning may not accurately reflect the intention in the original documents.

The desktop audit for Mathematics, Lao Language and World Around Us reviewed the extent to which the curriculum documents included a rationale and aims for each subject, the organization of the content, appropriateness for year level expectations, and opportunities for depth of learning and real world application. Alignment with the Education for All targets and achieving high levels of literacy and numeracy attainment was also checked.

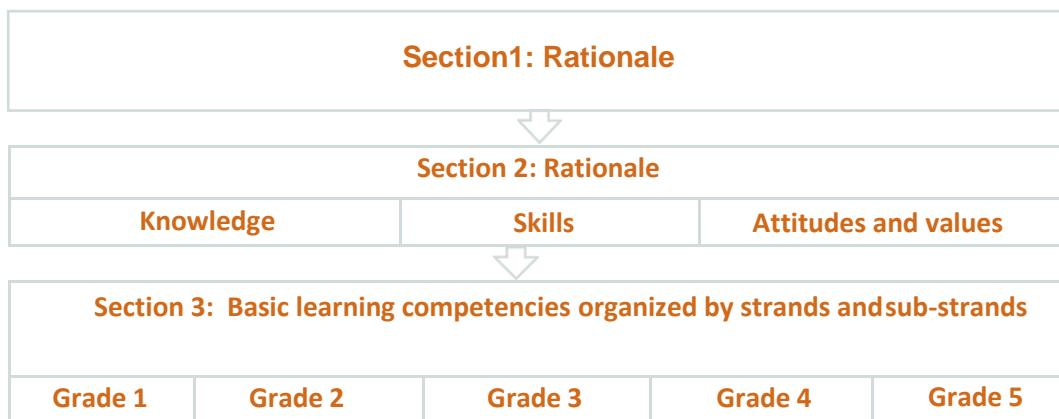
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<sup>42</sup> RIES, 2014

## Structure

The three core subjects have the same organizational structure of three sections (refer to Figure 4). The first section of each document provides a rationale which defines the scope of the subject as well as its relevance and importance in daily life. Aims are expressed in terms of the knowledge, skills, attitudes and values that students should develop. The aims encompass the five years of primary schooling. The knowledge component of the aims focuses on understanding and knowledge; the skills component on abilities; and the attitudes and values identify qualities such as respect, pride, problem solving and personal responsibility. The aims that describe the knowledge and skills are evident across the basic learning competencies, while the aims that describe attitudes and values are not clearly evident in the basic learning competencies.

Figure 4: Organization of curriculum documentation for each subject



In the curriculum structure, Section 2 explains how the subject is organized into strands and sub-strands. This section describes the knowledge and skills students are to acquire. The amount of detail in Section 2 varies within and across subjects. The purpose for the information is not clearly identified. The English translations read as a combination of an overview of curriculum content with broad statements about learning (learning outcomes) that span the five years of primary education.

In Mathematics some of the statements relate to specified grade levels (similar to achievement standards).

The third section of the curriculum structure, the content of the curriculum, is referred to as 'basic learning competencies'. Basic learning competencies are organized by strand, sub-strand and grade. The number of competencies per sub-strand is relatively consistent within each subject across the grades. Each competency commences with a verb and is written to complete the statement, 'The student will be able to'. Some competencies provide further clarity about what to teach by using the stem 'including'. This additional detail also commences with a verb. Each competency is numbered across the grades: the first competency in every sub-strand is numbered as '1' and the second is numbered as '2', and so on, for all grades.



## Implementation

A curriculum is a guide. It describes what should be taught and teaching priorities. The way a curriculum is written will lend itself to either teacher-directed or more learner-centered pedagogy. But a curriculum itself does not provide elaborate, detailed descriptions of how it should be delivered. A curriculum does not describe what the teacher has to do each day in class in order to teach the content or concepts prescribed in the curriculum.

All teachers need sufficient training to ensure they have the necessary skills to understand and teach the curriculum. Even highly trained teachers in developed countries still require extensive support in order to implement the curriculum. In addition, most teachers need explicit teaching and learning resources to support their daily implementation of the curriculum. For example, teachers need reading teaching programs as well as a wide range of books of differing levels of difficulty if they are going to teach reading. They need Mathematics teaching programs as well as extensive sets of materials used to model mathematical problems if they are going to teach Mathematics.

Teachers in Laos lack most of these things. They are generally poorly trained, have never observed good role models of teaching, have limited education and minimal resources. It is unrealistic to expect Lao teachers to be able to translate the curriculum basic learning competencies or learning outcomes into teaching practice without extensive support both in terms of ongoing, additional training and appropriate resources.

The status or central purpose of the document *Curriculum Primary Education* in schools is unclear. MOES reports that all primary schools are implementing the national curriculum and that one copy of *Curriculum Primary Education* has been sent to every school. It is reasonable to expect that teachers and school leaders will use the curriculum to support general decisions at the school level about how much time to allocate to different subjects. However, the curriculum is unlikely to be used as the main resource to support planning or decisions about the provision of curriculum in all schools because it does not explain how to teach the basic learning competencies.

The main resources available to teachers that tell them how to teach are the Teacher Guides and textbooks. Many teachers have to rely on Teacher Guides and textbooks as their sole access to the curriculum. Teacher Guides prescribe lesson plans for all nine subjects in all year levels. These lesson plans are supported by the textbooks. The following section identifies a lack of clear alignment between the Teacher Guides and textbooks and the overarching aims for education. They do not clearly align with stated expectations for high levels of literacy and numeracy attainment or opportunities for engaged learning through investigation and thinking and solving problems in real world contexts.

Lao PDR has a policy of allocating up to 20% of the national curriculum to localized curriculum stated in *Curriculum Primary Education*. The policy specifies that districts and provinces should assist schools to develop curriculum that better reflects local communities by adapting some of the content from the national curriculum. The purpose is to provide students with an

understanding of and appreciation for their local cultures, places of interest, artifacts, foods, costumes, ceremonies and rituals. Under this initiative, schools have the flexibility to adapt content and these adaptations are approved by provincial authorities. This initiative would require extensive resourcing through teacher training and the provision of models of adaptation of local curricula and extensive detailed teaching directions for teachers to be able to implement it.

During the review process it became evident that school leaders and teachers were not able to implement the localized curriculum policy. It was frequently expressed that the primary curriculum was overloaded with too much to teach and therefore little time or commitment was available to develop or introduce locally-relevant content for children to learn. It is also quite unrealistic to expect Lao teachers to understand the basic learning competencies in the curriculum so comprehensively that they would be able to identify local contexts that could support the same outcomes. This requires an extremely high level of teacher knowledge and proficiency.

### **Concerns**

Adequate teacher training and curriculum support material

Teachers need clear, practical, detailed lesson plans that are linked to the curriculum basic learning competencies, and professional development support to assist them to implement the lesson plans.

### **Conceptual growth**

The structure of each subject's curriculum could be enhanced by using additional organizational structures such as headings within sub-strands to more explicitly map the progression of learning across different grades.

The clarity of each subject's curriculum could be improved by identifying the specific knowledge, understanding, skills, values and attitudes to be taught in a developmentally valid sequence of learning across each grade level. The curriculum content is typically referred to as *content descriptions* or *student learning outcomes* and organized by strands and sub-strands. Additional detail to provide more clarity about the content can be referred to as *elaborations* or *indicators*.

### **Alignment**

It would be useful to align pre-Grade 1, primary and secondary curricula to provide a unified sequence of learning to ensure smooth progression from pre-Grade 1 to the final years of schooling.

## **Multi-age classes**

A reflection that was communicated frequently during the review process was that teachers needed and wanted practical guidance on how to teach multi-grade classes and how to cater for the range of students in their classes.

## **Quality control**

*Curriculum Primary Education* identifies requirements of teachers through statements such as: ‘Teachers should prepare lesson plans and use creative teaching methods in order to provide effective lessons and achieve the lesson goals.’ However, clearly stated expectations of how teachers are to achieve this, with specific details in relation to the most suitable creative teaching strategies or practical exemplars of quality lessons or lesson planning templates are not provided to assist schools and teachers translate these expectations into daily teaching practices.

It is also not clear how curriculum directives are monitored or enforced, such as the requirement that school include activities that support moral education, good behavior, personal organization, self-discipline, weekly and monthly school meetings and saluting the national flag.<sup>43</sup>

## **Standards**

As noted earlier, Education Quality Standards do not include specific standards regarding student attainment in literacy and numeracy or progress in other formal subjects, so there is no official requirement that these be systemically monitored in a consistent manner.<sup>44</sup>

It would be desirable to have aims that are specific to each grade in each subject, and to reduce the number of aims to sharpen their focus and ensure they are enacted through the curriculum content.

Standards that articulate the typical expectations for learning by the end of each grade would be useful. Ideally standards are drafted and validated through trials in a range of school settings. Once the standards are established, teachers can be supported in understanding the standards through access to quality assessments and samples of student work that illustrate what the evidence of learning looks like.

## **Quality of Teacher Guides and textbooks**

The connections between the national curriculum and Teacher Guides could be improved. Any proposed revisions to the curriculum will need to be enacted through the Teacher Guides and student textbooks. The quality of the Teacher Guides impacts directly on teaching and learning across the majority of classrooms and is therefore a pivotal resource in supporting improved teaching and learning.

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<sup>43</sup> RIES, 2010

<sup>44</sup> UNICEF, 2009 (as cited in Santibanez, 2014)

## Mathematics

### Suitability of strands and sub-strands

The strands and sub-strands in the Mathematics curriculum were compared with the organization of Singapore’s Mathematics primary curriculum. Table 13 provides an overview of the organization of both curricula. Singapore’s curriculum was selected because it has recently been revised (implementation commenced in 2013) and therefore provides an insight into current thinking in the organization of Mathematics curricula. Singapore’s Mathematics curriculum is well-regarded internationally.

**Table 13: Strands and sub-strands for Mathematics, Lao PDR and Singapore**

Mathematics – LaoPDR		Mathematics –Singapore	
Strand	Sub-strands	Strand	Sub-strands
Number	Whole number Decimals and fractions Money	Number and Algebra	Whole number Fractions Money
Operations	Addition Subtraction Multiplication Division	Incorporated into strand: Number and Algebra and sub-strand: Whole number	
Geometry	Two-dimensional space Three-dimensional space Position Data skills	Measurement and Geometry	Measurement Geometry
Incorporated into strand: Geometry and sub-strand: Data skills		Statistics	Data representation and interpretation
Not included in curriculum		Mathematical processes	Reasoning, communication and connections Applications Thinking skills and heuristics

Strands such as whole numbers, fractions, measurement and basic geometry have been included in primary Mathematics curricula for decades while data representation is a more contemporary addition.<sup>45</sup> Of interest is the inclusion of ‘data skills’ in the Geometry strand in the Lao curriculum. As is evident in Singapore’s curriculum, the trend is for the knowledge and skills associated with data representations and statistics to be grouped into a strand in its own right. The separation of Operations (addition, subtraction, multiplication and division) from the strand Number in the Lao curriculum also warrants further consideration. Operations are usually positioned as a sub-strand of Number and Algebra. Understanding place value, number patterns and being able to group

<sup>45</sup> UNESCO, 2012

and regroup numbers of objects are important prerequisites to successfully managing the more abstract mathematical computations associated with the four operations.

The addition of a mathematical process strand in the Singapore curriculum reflects a relatively recent trend to highlight the skills required to think and work mathematically. Including a process strand provides additional clarity with regard to the range of learning experiences and mathematical applications that should be included to support learning. It also provides clear guidance to writers of Teacher Guides and textbooks in relation to the kinds of teaching and learning activities required.

### **Appropriateness of year-level expectations**

The appropriateness of the year level expectations for Mathematics was considered relative to international best practice. This was determined by looking at two central dimensions: the content of what is being taught and the expected levels for learning. The Australian Mathematics curriculum was used for comparison with the Lao curriculum to determine the quantum and complexity of the content students are expected to understand and master. The Australian curriculum was chosen because the curriculum content is written in a way that enables a direct comparison with the Lao curriculum. The Lao curriculum articulates curriculum through what is referred to as basic learning competencies and the Australian curriculum through content descriptions.

Both countries have a similar quantity of basic learning competencies or content descriptions for Grades 1 to 5 (refer to Appendix Four). Both curricula significantly increase the number of mathematical concepts taught from Grade 1 to Grade 2. It is important to note that Australian children in Grade 1 have already had a full year of full-time formal education in a pre-Grade 1 class called Foundation as well as a full year of half-time education in a preschool setting before Foundation. Both the preschool and the Foundation classes are staffed by highly trained teachers with extensive resources provided to support teaching the curriculum. In this section the learning outcomes for Lao students who have just started school, most with no prior formal education, are compared with the learning outcomes for Australian students after they have already completed one and a half years of education.

Australia's curriculum places a significant emphasis on the strand Number and Algebra. Almost half of the curriculum content for Mathematics in Grade 1 is allocated to this strand (7 out of 14 content descriptions). This focus on Number and Algebra remains a priority through to Grade 5. The Lao curriculum places an equal emphasis on Geometry, Measurement and Number (which includes Operations for the purpose of this calculation) for Grade 1. In the other primary grades, both Geometry and Measurement are allocated more basic learning competencies than Number and Operations.

Two sub-strands for Number and two for Operations in the Lao curriculum were compared with similar sub-strands in the Australian curriculum to provide a benchmark for the levels of expectation for students in Grade 1.

The first learning competency was in relation to grouping objects, a critical foundation in learning mathematical concepts. Grade 1 in the Lao curriculum has one competency to describe this learning. The Australian curriculum allocates four content descriptions spread across two years of schooling (pre-Grade 1 and Grade 1) to map a similar developmental sequence of learning. Despite the compressed time (one year of learning instead of two), the Lao curriculum includes an additional expectation, that students in Grade 1 use the symbols  $<$  and  $>$ , which requires a higher level of understanding of numbers, relations and proportions<sup>46</sup> (refer to Appendix Five).

The second learning competency relates to counting, ordering and representing numbers. The Lao curriculum has one learning competency to describe this learning. The Australian curriculum has five content descriptions to sequence this learning, spread across two years (refer Appendix Six). Again, it is important to note that students in Australia have an additional full year of schooling, which significantly increases the time available to develop a similar quantum of knowledge, understanding and skills.

The third example looks at the sequence for teaching addition and subtraction from Grade 1 to Grade 3. This was selected in light of the findings in ASLO III<sup>47</sup> assessments which highlighted low levels of functional numeracy<sup>48</sup> in primary school students. Requirements in the Lao curriculum that are additional to requirements for student learning in the Australian curriculum are marked with an asterisk (\*). Students in Lao PDR are required to master significantly more complex mathematical operations by the end of Grade 1 than students in Australia (refer to Appendix Seven).

Through these three examples, it is evident that students in Lao PDR are required to engage in significantly more complex mathematical computations and progress at a faster rate than students in Australia. A focus on computations and rote learning will most likely occur too early for many Lao students at the expense of taking the time for hands-on exploratory learning that is required for young learners to develop a sound understanding of foundational mathematical concepts. The challenge for Lao students is further exacerbated by the limited access to pre-Grade 1 education services for the majority of students. In effect, in Mathematics, students in Lao PDR are required to learn more at a faster rate than students in Australia and with one year less of schooling. These difficulties are further compounded by many of the complexities noted in the Overview (Chapter 2).

Young students need time and many opportunities to experiment, investigate, solve problems and discuss their evolving mathematical understanding using a range of hands-on materials in

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<sup>46</sup> Department of Education and Early Childhood Development, 2009

<sup>47</sup> RIES, 2014

<sup>48</sup> In Grade 3, 53% of students reached pre-functional levels of numeracy, 23% reached the lowest level of functional proficiency and only 12% were operating at levels sufficient to continue learning at the next level of schooling without remedial assistance.

order to build the conceptual foundations needed to manage more complex mathematical abstractions. A review of the kinds of learning experiences that are highlighted in the two curricula indicate that the Australian curriculum has a stronger focus on active and engaged learning and higher order taxonomies as evidenced by such verbs as investigate, create, understand, apply and explore. The Lao Mathematics curriculum focuses more on procedural skills as evidenced through such verbs as approximate, count, recognize, select and demonstrate.

### Concerns

Some concerns about the expectations and organization of the Mathematics curriculum are:

- the lack of detail or clarity in the sequence of learning
- the extended time needed for students to develop their understanding of mathematical concepts before moving to more abstract processes, particularly for students who have not accessed pre-Grade 1 education
- the limited range and number of opportunities for learning by doing
- the pressure for students to master mechanical skills before understanding has been attained
- the limited opportunities for students to solve basic and meaningful real life problems using concrete materials
- the current separation of Operations from the strand Number
- whether study of data is best placed as part of Geometry or in an additional strand

### Lao Language

#### Suitability of strands and sub-strands

Language provides the foundation for thinking, communicating and learning. Learning to communicate clearly through speaking and writing are essential skills that students need to develop social relationships and to express ideas and feelings. Learning to read enables students to inquire and study, and to learn from and enjoy the ideas and writing of others.

Literacy is about more than reading or writing – it is about how we communicate in society. It is about social practices and relationships, about knowledge, language and culture. Those who use literacy take it for granted – but those who cannot use it are excluded from much communication in today's world. Indeed, it is the excluded who can best appreciate the notion of 'literacy as freedom'.<sup>49</sup>

While the development of literacy skills in primary schooling should be taught and consolidated in all subjects, it is the Lao Language curriculum that must be dedicated to teaching the essential knowledge and skills for listening and speaking, reading and writing.

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<sup>49</sup> UNESCO, 2003

The knowledge and skills for Lao Language are organized into three strands. These strands and their sub-strands were compared with Thailand’s national language curriculum. The Thai curriculum was chosen due to its close association with Lao Language. Both countries used strands most frequently associated with first language learning: speaking and listening, reading and writing. Thailand has an additional two strands: *Principles of usage of Thai language* includes grammar and punctuation, spelling, writing using a range of styles and formats, and the influence of foreign languages on Thai language; *Literature and literacy works* encompasses enjoying as well as critiquing literature and learning and comprehending children’s rhymes and folk songs that represent valued Thai wisdom. Appendix Eight shows the strands and sub-strands for Lao Language and Thai Language.

When compared to other national language curriculums<sup>50</sup> both offer considerably less structure and information for teachers and textbook developers. To illustrate this, Table 14 provides a comparison of the sub-strands for Lao Language and for English in the curriculum in Ontario, Canada. The numbers in brackets represent how many basic learning competency statements are in the Lao curriculum and the number of specific expectations in Ontario’s curriculum. Appendix Nine provides an outline of the sub-strands and specific expectations included in the Ontarian curriculum.

The knowledge, understanding, skills and attitudes articulated in the curriculum directly inform and influence teaching and learning through the interactions between teachers and students, particularly in terms of the timing and sequence of what is taught, how it is taught and how learning is monitored. In core and complex subjects such as Lao Language, it is essential that the content of the curriculum be clear, specific and mapped along a developmentally sound progression of learning.

**Table 14: A comparison of the sub-strands for Lao Language and for English in the Ontario curriculum**

Strands	Lao PDR sub-strands	Ontario sub-strands
Speaking and listening (Lao PDR)	Applying speaking and listening (3)	Listening to understand (9) Speaking to communicate (7)
Oral communication (Ontario)	Skills and strategies (4)	Reflecting on oral communication skills and strategies (2)
Reading (Lao PDR)	Reading texts (4)	Reading for meaning (9)
Reading (Ontario)	Skills and strategies (4)	Understanding form and style (4) Reading with fluency (3) Reflecting on reading skills and fluency (2)
Writing (Lao PDR)	Writing texts (3)	Developing and organizing content (6)

<sup>50</sup> Curriculum documents from Ontario (Canada), Australia, United Kingdom and Singapore.



Writing (Ontario)	Grammar and punctuation (4) Spelling (3) Handwriting (1)	Using knowledge of form and style in writing (8) Applying knowledge of language conventions and presenting written work effectively (8) Reflecting on writing skills and strategies (3)
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### Appropriateness of year-level expectations

The appropriateness of the year level expectations for Lao Language was considered relative to international best practice. This was determined by looking at two central dimensions: the content of what is being taught and the expected levels for learning. Chapter 5 deals in some detail with the reading and writing components of Lao Language, so the focus here is on speaking and listening.

The English curriculum from Ontario was used for comparison with the Lao curriculum to determine the quantum and complexity of the content students are expected to understand and master. Ontario’s curriculum was selected due to its clarity and sequence which has supported significant improvements in student literacy attainment over the past decade. The Lao curriculum articulates the detail of the curriculum through basic learning competencies and the Ontario curriculum through specific expectations. There is a significant difference in the level of detail and clarity between the two curricula for Grades 1 to 5. The specific expectations in Ontario’s curriculum reflect a clear sequence of learning that maps how learning progresses in each of the strands. Teachers have clarity about what to teach through the wording of each specific expectation, the examples provided and prompts to further guide teachers. In contrast, the Lao Language curriculum provides little to no detail of how learning progresses. The English translation of the curriculum presents a series of observable behaviors rather than the actual learning that is required.

Oral language is the foundation for learning. It is through exposure to many opportunities to listen and talk in structured and unstructured situations that students learn how to communicate information and come to understand ideas and concepts. Listening and speaking skills are essential for social interaction at home, at school, and in the community. It is through social interaction that students organize knowledge and experiences and express and clarify thoughts, feelings and opinions.

Acquiring skills in speaking and listening is fundamental to the development of all other literacy skills and to successful learning at school. Table 15 provides an example of requirements for speaking and listening in the Lao and Ontario curricula. The example from Ontario points more clearly to the skills students need to develop in order to listen attentively.

**Table 15: Comparison of speaking and listening in Lao and Ontarian curricula**

Strand	Lao Language	English – Ontario curriculum
Speaking and listening	<p>Demonstrate skills in basic classroom interactions, including:</p> <ul style="list-style-type: none"> <li>• participate with teacher support</li> <li>• mostly attentive to others</li> <li>• use appropriate levels of politeness and formality</li> </ul>	<p>Demonstrate an understanding of appropriate listening behavior by using active listening strategies in a few different situations.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• listen without interrupting and wait their turn to speak</li> <li>• show that they are paying attention and are interested by looking at the speaker, nodding, or asking relevant questions</li> </ul>

Similarly for Reading and Writing, the Lao Language curriculum provides insufficient detail to describe what students need to learn and be able to do to read and write well.

As with the Lao Mathematics curriculum, it is evident that the Lao Language curriculum, in general, requires students to engage in procedural and technical activities before the foundation skills in oral language and readiness for writing and reading are developed. This requirement for formal and structured learning will most likely occur too early for many young learners, particularly those who are learning Lao Language as their second language. This challenge is further exacerbated by the limited access to pre-Grade 1 education services for the majority of students in addition to the complexities noted in Chapter 3.

**Concerns**

Some concerns about the expectations and organization of the Lao Language curriculum are:

- the lack of detail and clarity in the sequence of learning
- the need for students to have more time to develop their understanding of language concepts through extensive opportunities to express their ideas and thoughts and develop their oral language skills, particularly for students who have not accessed pre-Grade 1 education
- the limited range and number of opportunities for learning and practicing language skills
- the pressure for students to master more formal technical skills before an understanding of language and its many forms and uses has commenced development
- the limited opportunities for students to read, write and discuss in a range of contexts and across all subjects

- the additional time and support needed, for example through supplementary modules, by students entering school who cannot speak or understand Lao Language
- the limited opportunities provided to students to develop higher level thinking skills to enable an appreciation and critical evaluation of what they hear and read
- the limited opportunities provided to students to develop higher level thinking skills to enable continual evaluation of what they write and their oral presentations

## World Around Us

### Suitability of strands and sub-strands

The strands and sub-strands appear to cover similar areas of content to Thailand’s curriculum where students in primary school study Science, Social Studies, Religion and Culture. Malaysia’s curriculum also offers students integrated studies, although in recent years the teaching of Science has been emphasized. Vietnam has streamlined its curriculum. Students in Grades 1 to 3 study just one subject, Nature and Society, while in Grades 4 and 5 students are introduced to Science, History and Geography.

The subject World Around Us represents a combination of Science, Health, Social Studies and Geography. The stated focus is to provide students with opportunities for learning that relates to their daily lives including the local environment and community. World Around Us has three distinct strands which are further divided into sub-strands (refer Table 16).

**Table 16: Strands and sub-strands for World Around Us**

World Around Us strands	World Around Us sub-strands	
Living things	Our body and our health Plants and their	Animals and their behaviors Relationships between living
Non-living things	Matter and its uses	Energy and chemicals
Lao PDR: Our people and environment	Geography and history	Social organization

### Appropriateness of year-level expectations

The appropriateness of the year-level expectations for World Around Us was determined by looking at the expected levels for learning articulated in the curriculum to see whether these were congruent with the skills identified in the aims for the subject

Of the three core subjects being reviewed, World Around Us presents an ideal opportunity for students to learn skills in inquiring, questioning, gathering information, making and testing hypotheses and drawing conclusions. World Around Us is intended to provide students with opportunities to:

- plan and undertake investigations and research topics and issues by gathering valid information
- observe, appraise (measure and evaluate), analyze (classify and interpret data) and take action
- use basic research techniques such as interviewing local people and using textbooks to search for information
- work in groups to share opinions
- think critically, basing opinions on supportable and reliable evidence

Bloom’s Revised Taxonomy<sup>51</sup> was used to categorize the basic learning competencies in the Grade 1 World Around Us curriculum. This taxonomy classifies and orders skills according to the degree of higher order thinking required. Within Bloom’s Revised Taxonomy, remembering is classified as the lowest order skill, requiring activities involving recalling, listing, naming, locating and describing. Learning activities that involve applying new knowledge are signaled by activities such as using, carrying out and implementing. The highest order learning occurs when students have opportunities to deepen their knowledge and understanding through designing, planning and constructing.

Of the 23 basic learning competencies in the English translation of World Around Us, four basic learning competencies required higher order skills. Three competencies, signaled by verbs such as use and survey, asked students to apply their learning. One competency asked students to research and analyze information. The majority of competencies ask students to remember, the lowest order level of thinking, signaled by verbs such as tell, describe and identify (refer Table 17).

**Table 17: Identification of competencies using Bloom’s Revised Taxonomy**

Bloom’s Revised Taxonomy	Remember	Understand	Apply	Analyze	Evaluate	Create
Verbs in World Around Us	Tell Describe Identify		Use Survey	Research		

When looking at the number of basic learning competencies that are required to be covered in World Around Us, in light of the learning described in the additional seven subjects for Grades 1 and 2 and additional eight subjects for Grades 3 to 5, it becomes evident that primary schools have an overloaded curriculum.

### Concerns

Some concerns about the World Around Us curriculum are:

<sup>51</sup> Krathwohl, 2002

- the limited opportunities for students to apply and develop higher order skills, to be actively engaged in learning, to think and discuss, and to solve problems by embedding these skills into learning expectations and curriculum content
- the unrealistic expectation that teachers and supervisors have the necessary skills to develop localized curriculum and the need to provide detailed localized teaching materials and teacher training support for this to be implemented

### Teacher Guides

The desktop audit for the Teacher Guides for Mathematics, Lao Language and World Around Us reviewed the extent to which the Guides selected structured teaching methods recognized by extensive bodies of research to enhance student learning. The Teacher Guides were also reviewed to determine the alignment of planned lessons with the curriculum presented in Curriculum Primary Education, Lao PDR's national curriculum for primary education. How effective the Teacher Guides were in assisting schools and teachers to develop high levels of literacy and numeracy attainment with their students was also checked.

Across the three Teacher Guides reviewed, the predominant teaching methodology reflects a traditional teaching paradigm in which the teacher dominates the lessons and students have relatively passive roles such as responding to low level questions, completing routine tasks and engaging in repeated practice of technical skills. There is little evidence in the sequence of units and lessons across the subjects that students have sufficient opportunities to investigate, explore and discuss in order to develop their understanding of fundamental concepts before being required to engage in more abstract and technical routines.

#### Alignment of Teacher Guides to the national curriculum

All Teacher Guides are organized using five sections (see Figure 5). Section One identifies grade specific aims for each subject. Section Two identifies the basic learning competencies for each grade. There is a degree of alignment between these competencies and those described in *Curriculum Primary Education*, however, the curriculum content described in the Teacher Guides offers less detail. The competencies in the Teacher Guides are not clearly adapted to suit different grades. For example, in Lao Language there are six aims, one each for listening-speaking, reading, writing, handwriting, sitting position, and attitudes and values. There is not a clear connection between the first five aims in the Lao language national curriculum and the aims articulated in the Teacher Guide in the English translations. The first five aims in the Teacher Guide represent lower expectations when compared to the basic learning competencies in the Lao language. In the Teacher Guide, the basic learning competencies are organized by strands, while sub-strands are not included.

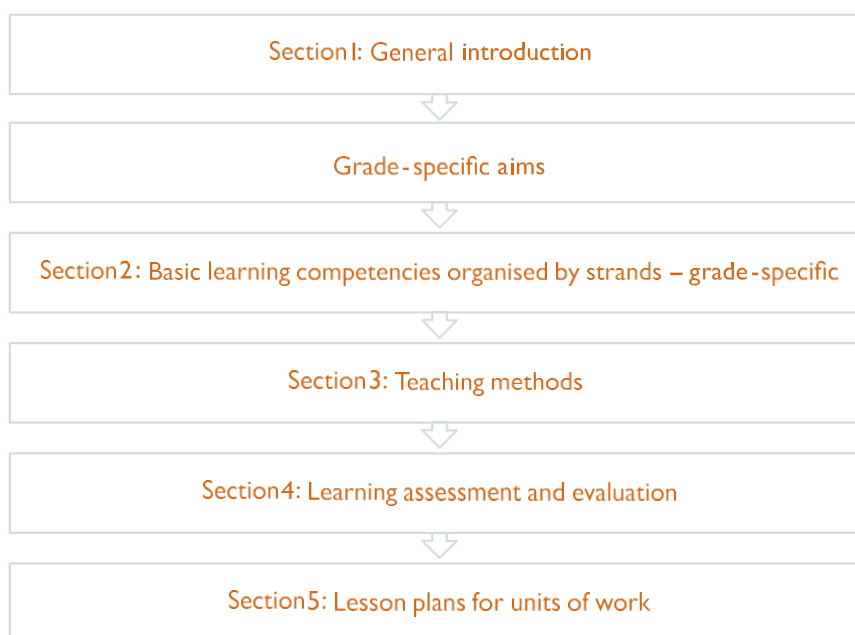
Section Three identifies teaching methods. This section notes the importance of applying different teaching strategies to support student learning. Teachers are advised to follow the student textbook to inform their teaching and to study the instructions provided in the textbooks.

Section Four outlines the same required assessment schedule for each subject. Assessment is to occur:

- after each unit
- after teaching three units following time for revision
- at the end of each semester

Written responses and multiple-choice questions are the recommended formats for assessment. Teachers are required to keep a mark book. When students pass a test they receive a tick. Teachers are instructed to find ways to assist students who do not receive a pass mark for a test.

**Figure 5: Organization of Teacher Guides**



### Concerns

The Teacher Guides are the curriculum for teachers and need to provide explicit directions for every class that teachers take if the activities in the classroom are going to reflect a curriculum intention to build students' literacy and numeracy skills as well as develop their values and appreciation of the world around them. With thoughtful, informed development it is possible to provide a teacher-directed approach to learning that still has a focus on developing understanding in students. All lessons should include opportunities for daily review, presentation of new content and skills in small steps, guided student practice with close teacher monitoring, corrective feedback and independent practice with a high (for example, 90%) success rate, and incorporation of diagnostic feedback.

Teachers would still require extensive retraining and support.

Teacher Guides need to enact all reforms identified in a review of the curriculum. For example, building in an increased emphasis on providing students with time and opportunities to learn and

master concepts and skills that are needed to progress learning; frequent exposure to opportunities to apply learning in a range of relevant, real world contexts; and increasing opportunities for students to discuss alternative solutions and explain their thinking.

### Student textbooks

Textbooks for students in relation to Mathematics, Lao Language and World Around Us were reviewed using the following criteria:

- Does each book make sense to students working independently and to teachers who do not have access to the Teacher Guides? Are there clear explanations and instructions?
- Is the content portrayed in each textbook clearly aligned to the national curriculum?
- Are the textbooks interesting and appealing to students?
- Do the graphics and illustrations reflect student diversity such as the range of ethnic groups and education contexts?
- Do the textbooks provide opportunities for students to solve problems and apply their learning in relevant, real-world contexts?
- Do the textbooks support Laos' priorities for literacy and numeracy learning?

In relation to the Mathematics textbooks, on the whole, most of the activities do not include clear explanations for teachers or students. The majority of the exercises are focused on repetitive practice of abstract, technical skills. Follow-up activities to monitor student understanding and learning are not provided. There are limited opportunities for students to apply Mathematics knowledge and skills to real-world contexts. Activities do not appear to be arranged in a logical or systematic sequence.

The textbooks for Lao Language do not include clear explanations for teachers or students. Many of the activities do not have readily identifiable objectives or a clear purpose and are focused on repetitive practice of abstract, technical skills. Follow-up activities to monitor student understanding and learning are not provided. There are limited opportunities for students to apply language knowledge and skills to real-world contexts. Activities do not appear to be arranged in a logical or systemic sequence.

The textbooks for World Around Us do not include clear explanations for teachers or students. The content of the textbooks appears to be organized by topics; however, it is not clear how students are expected to respond to many of the activities. There appears to be a reliance on presenting information as isolated knowledge or theory rather than applying learning to real-world contexts.

All student textbooks require the associated Teacher Guides for them to be used effectively. There are clearer links between the textbooks and Teacher Guides for Mathematics and World Around Us than for Lao Language. The assessments included in the student textbooks rely

significantly on teacher observation. Student learning is assessed through marks out of ten. Explanations are not provided to students or parents in relation to what students know and can do and where additional support is required. A focus on strengthening the literacy and numeracy skills of students as well as their abilities to think critically and solve problems is not clearly evident.

### **Concerns**

More research is required to identify the key characteristics of effective textbook design for students. Textbook developers require clear guidelines to ensure that activities support student learning by including clear explanations and opportunities for frequent practice, and provide teachers with insights into what students know and can do and where additional teaching or learning support is required.

Many small schools in Lao PDR have multiple grades in the same classroom, creating challenging teaching issues if the teacher is expected to simultaneously deliver lessons from different Teacher Guides and textbooks to different students. It is unrealistic to expect teachers to be able to resolve these challenges themselves.

One solution is to provide greater flexibility in the delivery of the curriculum. But this would need to be supported with Teacher Guides and textbooks specifically designed to cater for multi-grade classes. That is, teachers would require detailed, specific instructions about how to implement a more flexible curriculum. Multi-grades would need their own Teacher Guides and textbooks.

### **Time allocated to learning in primary schools**

The school year consists of two semesters. Semester 1 commences in September and ends in January. Semester 2 commences in February and ends in May. At the end of May the focus is on revision of past learning and examinations. The formal curriculum is taught for a maximum of 33 weeks with an additional five weeks allocated for preparation, revision, examinations and celebrations.

Primary aged students attend school five days each week. For students in Grades 1 and 2, each school day has five hours of classroom instruction time. One class lesson equals 45 minutes. From a total of 25 hours of instruction time, 23 hours are allocated to the nine formal subjects and two hours to class and school activities.

Students in Grades 3 to 5 have an additional hour per week of classroom instruction. Twenty-four hours are allocated to the nine formal subjects and two hours to class and school activities.

For all primary students, extracurricular activities are allocated three hours per month.

Table 18 shows the relative time allocations for the formal subjects and class and school activities.



**Table 18: Time allocated to formal subjects, class and school activities for Grades 1 to 5**

Subjects	Hours per week				
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Lao Language	12	10	8	6	6
Mathematics	3	4	5	6	6
Moral Education	1	1	1	1	1
World Around Us	2	2	2	3	3
Art	1	1	1	1	1
Music	1	1	1	1	1
Handicraft	1	2	2	2	2
Physical Education	2	2	2	2	2
Foreign Language (English)	0	0	2	2	2
<b>Sub total</b>	<b>23</b>	<b>23</b>	<b>23</b>	<b>24</b>	<b>24</b>
Class and school activities	2	2	2	2	2
<b>Total</b>	<b>25</b>	<b>25</b>	<b>26</b>	<b>26</b>	<b>26</b>
Extracurricular activities	3 hours per month				

Table 18 shows that:

- The amount of time allocated to Lao Language commences with 12 hours each week in Grade 1 and decreases by two hours per week in subsequent grades. Six hours per week is allocated to Lao Language in Grades 4 and 5.
- The amount of time allocated to Mathematics increases from three hours each week in Grade 1 and increases by one hour per week in subsequent grades. Six hours per week is allocated to Mathematics in Grades 4 and 5.
- Moral Education, Art, Music and Physical Education remain at one hour per week for all grades.
- The World Around Us increases from two hours each week in Grades 1, 2 and 3 to three hours per week in Grades 4 and 5.
- Handicraft increases from one hour per week in Grade 1 to two hours per week for all other grades.

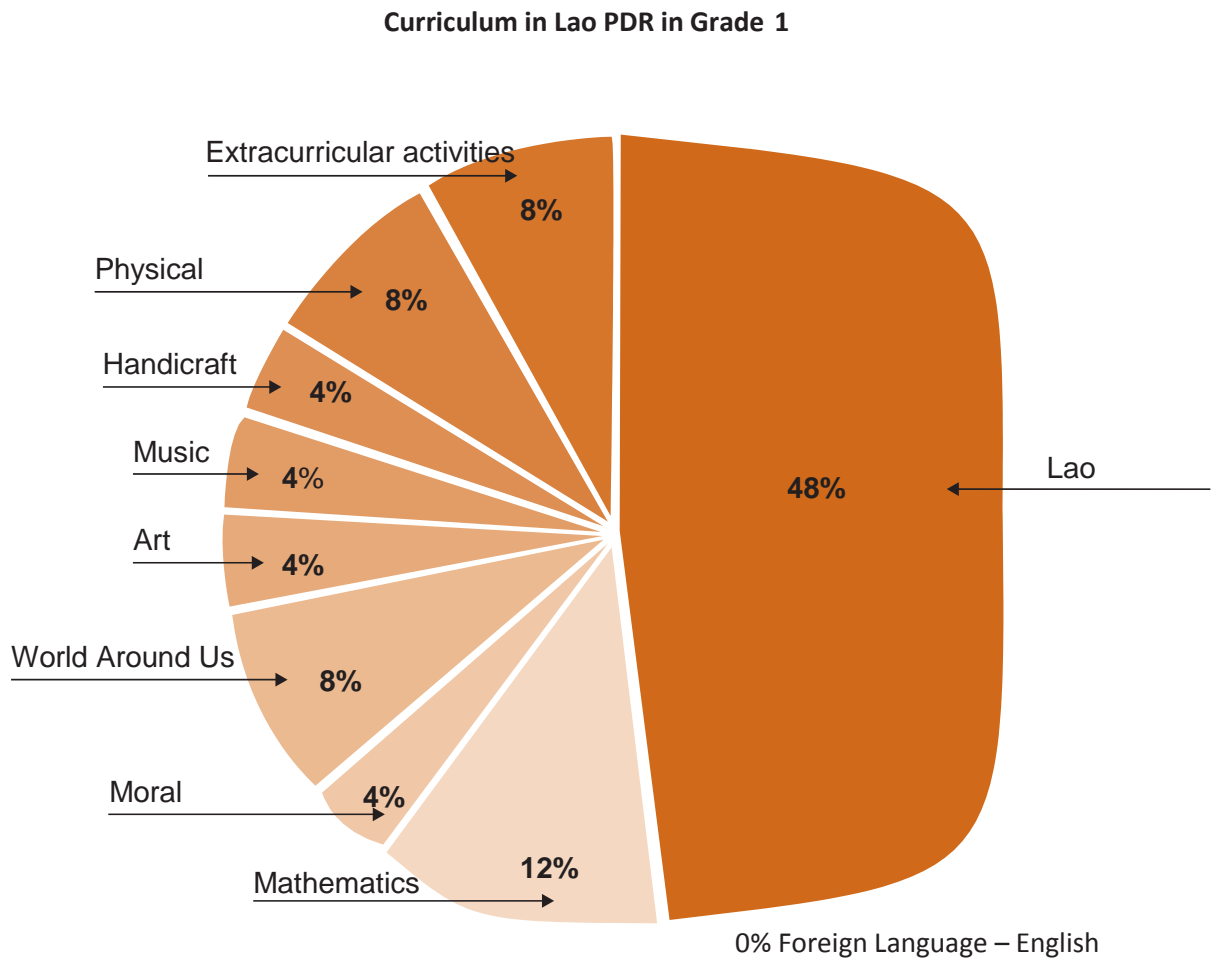
- Foreign Language (English) commences in Grade 3 for two hours per week. English is not taught in all schools.
- Time allocated to school and class activities remains two hours per week for all grades.
- Time allocated to extracurricular activities include celebrations of important historical and cultural days, participating in art competitions, sports, cleaning the classroom and school through working-bee activities, projects that support preservation of the environment and other public service activities.<sup>52</sup>

Figure 6 provides a breakdown of time allocated to the Grade 1 curriculum. A significant proportion of Grade 1 is allocated to learning Lao Language (48%). Mathematics receives 12% of allocated time. The World Around Us, Physical Education and extracurricular activities receive 8% of allocated time.

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<sup>52</sup> RIES, 2010

Figure 6: Time allocated to formal subjects, class and school activities for Grade 1



**Concerns**

Teachers often complain of an overcrowded curriculum, but there are 12 hours per week allocated to Lao Language in Grade 1 which ought to be sufficient. The lack of specifications as to how this might be allocated across reading, writing and speaking and listening could be a problem.

Mathematics only has three hours per week in Grade 1 to cover a lot of curriculum content. It would seem more time for Mathematics from the start of school might be appropriate.

Reducing the amount of other content taught in the primary years would help to sharpen the focus on what learning is essential and streamlining the number of subjects studied.

**Integrated curriculum**

A possible solution to reduce the overcrowded curriculum and provide increased opportunities for students to apply their emerging literacy and numeracy skills would be to introduce a more integrated curriculum. Handicraft, arts, music and moral education could all be part of a study of the World Around Us. Many aspects of Mathematics and language could be applied in such a subject.

## 7. REVIEW SUMMARY

*... quality is at the heart of education, and what takes place in classrooms and other learning environments is fundamentally important to the future well-being of children, young people and adults ...<sup>53</sup>*

This report provides a comprehensive and current picture of student learning outcomes for primary education in Lao PDR. From the research on curriculum design, desktop analyses and international comparisons it has assembled a thorough assessment of the policy and curriculum framework, curriculum plans in key areas, Teacher Guides and textbooks, and time allocation across the primary curriculum in Lao PDR. Four key points are repeated here:

1. Curriculum intentions would be clarified if the curriculum included a detailed explanation of effective student-centered teaching and assessment pedagogies for Lao PDR (for example structured teaching or discovery learning) that are culturally appropriate and incorporate what is known about how young students learn.
2. Greater consideration needs to be given to the implications of how to best provide ongoing support to teachers to help them to understand how and why they need to teach with a learning model that is focused on understanding.
3. If students are to learn with understanding, the curriculum needs to focus on the key concepts that underpin early reading, writing and mathematics, describe these in an appropriate developmental sequence and allow sufficient time for students to grasp these concepts before progressing onto more challenging content.
4. National, regional and school-based assessments all need to focus on the assessment of students' understanding and ability to apply their skills in a range of contexts, if these are the skills that are valued. Teachers and District Pedagogical Advisors need to be supported to understand how to change their assessment practices.

The overriding focus of this work is to inform a future review of primary curriculum in Lao PDR. It is necessary to ensure that student learning outcomes are contextually relevant to children's lives, align with the broader policy context and the regional Association of Southeast Asian Nations (ASEAN) qualifications framework, reflect contemporary education theory and practice, particularly with neighboring ASEAN countries, and are practical and realistic in their implementation by the teaching workforce in Lao PDR.

Further consultation on the key considerations noted in this report will be valuable in guiding the subsequent stages of this review.

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<sup>53</sup> UNESCO, 2000, p. 17  
Situation Analysis – Student Learning Outcomes in Primary Education

## 8. FINAL RECOMMENDATIONS

This chapter outlines the final recommendations that arose from the presentation of the review findings to staff of the Research Institute of Educational Sciences (RIES) at a one-day workshop.

The workshop was held on July 14, 2015, in Vientiane. It was chaired by Dr. Onekeo Nuannavong, Director General of RIES and attended by 39 members of the RIES staff.

Seven of the key issues arising from the findings of the situational analysis of student learning were identified and draft recommendations were presented to the workshop for review. The situational analysis identified other issues of possible concern that may also be relevant to development of the plans for reviewing the Lao primary learning outcomes.

There were some misunderstandings over terminology. Learning outcomes and basic learning competencies are considered to be the same thing. They describe what teaching and learning should take place in each subject at each grade level. If student learning standards are adopted, it is recommended that these should be based on a selection of the learning outcomes and not separate descriptions of what students need to learn.

### 1. Alignment of goals across the education system

There are clear policies in place in Lao PDR to improve the quality and relevance of education, reform the curriculum and improve school and teacher performance. Reform is more likely to be effective if it is consistently applied across the whole of the education sector.

It would be desirable if revised learning outcomes in the primary curriculum are:

- clearly aligned with the pre-primary curricula
- clearly integrated with teacher training college objectives and teacher training programs
- clearly linked to practical implementation strategies that help teachers manage the complex challenges of teaching in Lao PDR
- the basis for student learning standards, if these are developed
- clearly linked to each lesson plan in the Teacher Guides and textbooks
- clearly linked to examinations and local assessments
- clearly linked to the ASLO test design and described levels of proficiency

### Recommendations

- 1.1 All the key stakeholders in preschool and primary education including RIES, the Educational Standards and Quality Assurance Centre (ESQAC), Teacher Education, District Pedagogical Advisors, teachers and Village Education Development Committees (VEDC) are consulted and involved in the reform of the learning outcomes of the curriculum.

- 12 Each key stakeholder develops a plan to show how the revised learning outcomes impact on their work and how they will make changes to their practice to implement this reform.
- 13 Quality assurance procedures are established to monitor the alignment of goals across the education system.

## 2. Clarify student-centered learning model

MOES wants teachers to move away from rote teaching towards a more student-centered model of education. There is clear recognition that teachers need to deepen their understanding of how children learn. Student-centered learning is a very broad term that can be interpreted in many different ways. It would be most helpful if documentation could be developed that both identifies what a student-centered model of learning might look like in Lao PDR and is also practical for teachers to implement.

Clarity about the model of student-centered learning that is desired in Lao PDR would make interpretation of the learning outcomes clear. It would help to ensure consistency in teacher training, Teacher Guides and textbooks and assessments about how to implement and assess the learning outcomes and support the development of clear standards to monitor quality. It would also provide clear expectations to donor countries about the kinds of interventions that should be undertaken in Lao PDR.

### Recommendations

- 21 Identify and describe an effective model of teaching and learning that helps students understand and be able to apply their knowledge and skills in everyday situations. It should have a strong focus on teachers' understanding and responding to students' learning needs. The new model should include effective strategies so teachers can cater to different learners' needs, including in multi-grade classes, and to different rates of learning.
- 22 The new model of teaching and learning has to suit Lao PDR and be feasible to implement in rural as well as urban settings with limited resources. If any additional resources are required these must be affordable for all schools.
- 23 All key stakeholders in education are consulted including RIES, ESQAC, Teacher Education, District Pedagogical Advisors, teachers and VEDC over the refinement and adoption of a new Lao model of teaching and learning. The learning outcomes are not revised until the new Lao model of teaching and learning has been approved.
- 24 A draft of the new model of teaching and learning is initially implemented in some trial schools and refined as necessary.

### 3. Curriculum focused on understanding

The current primary curriculum learning outcomes for Language, Mathematics and the World Around Us could be revised to better suit a student-centered approach to learning and reflect international best practices in teaching these subjects. Students are more likely to develop reading, writing and mathematics skills if they are taught a curriculum that focuses on understanding the key ideas. Students are also more likely to engage in thoughtful discussion of the topics in the World Around Us if they are taught some higher level thinking skills.

The current learning outcomes may be appropriate for subjects such as Moral Education, Art, Music, Handicraft and Physical Education.

The key features of a curriculum that focuses on developing understanding are:

- a detailed description of a continuum of development of key concepts and understandings in reading, writing and mathematics
- sufficient time allowed for students to master early understandings before progressing to more complex content, and extensive opportunities for practice
- a strong focus on cognitive processes especially encouraging students to think, apply their skills, generate and record their ideas, produce brief, original pieces of writing and represent their understanding in meaningful ways
- flexible delivery that recognizes students start their learning at different points and learn at different rates
- extensive integration of reading and writing so students apply their early understanding in relevant contexts to produce meaningful representations
- advocating learning by doing through the integration of literacy and mathematics skills across other subjects such as World Around Us.

#### Recommendations

- 3.1 Either find or adapt continua that illustrate, in detail, how students learn for three key areas of the curriculum: Language, Mathematics and World Around Us. This should be done before the new draft learning outcomes are developed.
  - 3.1.1 The reading and writing continua should reflect the interrelated nature of these skills and describe in detail how children learn to read and write, taking into account the orthographic complexities of Lao and recognizing that some children come to school from environments with very little experience of the printed word.
  - 3.1.2 The speaking and listening continua have two parts. One part describes in detail how children first learn Lao when it is not their mother-tongue language and the other describes progression in the development of speaking and listening skills for students who are able to speak Lao.

- 3.13 The mathematics continuum should focus on cognitive processes as well as content and describe the progression of skills from the very first understandings about numbers.
  - 3.14 Develop a continuum that describes how students learn to think in the context of studying the World Around Us and how the integration and application of their literacy and numeracy skills in this subject could support the development of their thinking skills.
- 32 Once the continua have been developed, and the new Lao model of teaching and learning has been approved, new learning outcomes must be developed for reading, writing, speaking and listening, mathematics and the World Around Us that reflect the progressive development of the skills and cognitive processes described in each of the continua in 3.1.
  - 33 Undertake revisions to the learning outcomes for Moral Education, Art, Music, Handicraft and Physical Education after the revisions to Language, Mathematics and World Around Us, to ensure the review task is feasible and also to learn from earlier revisions.

#### 4. Language

MOES is aware that it is inappropriate to start teaching non Lao-Tai students to read and write or learn mathematics before they have learned how to speak in Lao. The curriculum currently has little scope to allow for the extensive amount of extra time required. There does not appear to be much support or guidance for teachers about how to teach Lao as a second language. All students need to speak, read and write in Lao to function in Lao society. Access to effective Lao language proficiency classes is essential.

There are currently a number of initiatives in rural villages to help children better prepare for school, including preschools, village playgroups led by a village teacher and programs designed to show mothers what they can do to help prepare their children for school. A strong focus on teaching children to speak Lao in these programs will help to ensure children start school able to speak Lao. Alternative solutions may be required in villages without preschools where there are not enough people who speak Lao available to teach young children.

The place of ethnic languages in the Lao curriculum is not clear. There are programs in place to recruit mother-tongue teachers to work in the early grades. Students need to speak well in the language in which they first learn to read. Mother-tongue instruction only supports reading if the student learns to read texts that are printed in their mother tongue before they start speaking and reading in Lao. There are more than 200 ethnic languages in Lao PDR, so it is not clear what might be practical. If students have to first learn to read in Lao, because the only textbooks and resources available are printed in Lao, then they need to speak Lao well before they start learning to read.



## Recommendations

- 4.1 Strengthen the preschool programs, village playgroups and programs working with mothers to help them prepare their children for school by ensuring there is a strong focus and clear commitment to teaching all children to speak Lao proficiently before they come to school.
- 4.2 Establish adult classes in Lao Language and reading for parents in rural villages who do not speak or read in Lao, so the parents can better prepare their children for school and support them when they are in school.
- 4.3 Clarify the place of ethnic languages in the Lao curriculum and identify the resources required to support mother-tongue instruction where this is being implemented.

## 5. Assessment, multi-grades and standards

National assessments play a critical role in monitoring the effectiveness of teaching and learning. The data can also inform curriculum development and reform.

The ASLO III data show a large mismatch between the curriculum expectations in mathematics and students' actual levels of achievement. For many students the mathematics curriculum was probably too hard when they started in Grade 1 because it did not cover basic concepts that are essential to being able to do any work with numbers, such as one-to-one correspondence. These students could learn if the teaching started at a more appropriate level for them. Comparisons with the Grade 1 curricula of countries with high levels of numeracy are difficult because students in these countries have usually had at least one or two years of formal school instruction before they start Grade 1. Also, many of these students come from home backgrounds with well-educated parents who teach their children many basic concepts about counting and numbers before they come to school. Many Lao children do not have preschool education or home environments that teach them early number skills.

ASLO III data show there is a wide range of student ability in Grade 3. Some students can do very little, some have learned a little bit of mathematics and some have quite a range of skills. High standards are necessary to ensure that the skilled students continue to learn, but realistic standards are also necessary, in addition, for other learners or they will not be able to learn at all. Teachers have to be able to cater for the wide range of abilities in mathematics even in a single grade class.

The ASLO III data appear to suggest that the teaching of Language is more successful than Mathematics. This contrasts with data collected from recent donor country assessments of reading, such as EGRA and Save the Children, that show low levels of reading skill from Grades 2 to 4. The likely reason for this discrepancy is that the ASLO Language score is a composite score that includes speaking and listening, reading and writing as well as spelling and grammar. Students can appear to be proficient in Language even if they do not answer any of the ASLO

reading questions correctly. Data from EGRA and Save the Children suggest that there is also a large mismatch between the curriculum expectations for reading and students' actual levels of achievement.

An improvement in ASLO reporting would be to match the described levels of proficiency for language and mathematics in the ASLO data with the difficulty of the items. That is, the description of each level should reflect the skills addressed by the items that have the same range of difficulty on the scale as that level. Currently the items are assigned a level that corresponds with skills descriptions in the curriculum, but not with the actual item difficulty. For example, in the ASLO III Language assessment, 13 of the 16 writing items were harder than all the rest of the Language items except one reading item, suggesting writing is more difficult for Grade 3 students than the level descriptions currently indicate. The top two levels of the described levels for Language should only concern writing.

High rates of attrition in Grade 1 are possibly also linked to students' likely feelings of frustration when they are taught a curriculum that starts at a point that is too advanced for them and moves very quickly, so they have little hope of understanding or mastering reading, writing or mathematics. These students could learn if the curriculum started with earlier concepts and focused on students understanding these concepts before advancing to more complex ideas.

The challenges faced by teachers in multi-grade classes are the same as those faced by teachers in single grades. There is a wide range of ability in reading, writing and mathematics and teachers have to find a way to cater for this if everyone is going to learn. Creating needs-based classes in reading and writing and mathematics may be a solution. Students could return to age-based grades for instruction in the rest of the curriculum.

Needs-based classes for reading, writing and mathematics would allow Lao PDR to maintain the high standards of the current curriculum for the small number of students who are able to work at this level, while also providing the foundational skills that the other students require if they are going to learn at all.

### **Needs-based classes: How it works**

Needs-based classes require the curriculum to mandate one hour per day of reading and writing instruction in all primary schools to be conducted at the same time with each class catering to different learning needs for Language. Each teacher in the school takes one of the needs-based Language classes for one hour. Teachers use a simple assessment to identify students who know a few letters and words, those who know all the letters and some words and those who can read sentences. All students, regardless of their actual grade, who only know a few letters go to the 'letters' class. All students who know all the letters and some words go to the 'words' class. All students who can read sentences go to the 'sentences' class. All students will then receive one hour daily instruction in reading and writing that matches their learning needs and maximizes the opportunity for every student to learn. At the end of every month, the teacher assesses each student one-by-one again. As soon as students master the skills in one class, they move to a more advanced class. This whole process could also be followed for Mathematics for one hour per day.

The assessments can be very simple. All the teacher needs is a pile of cards, each with letter of the Lao alphabet. Each child is assessed individually. The teacher shows the child each card and they say the letter sound. If they get it right the teacher puts the card on the “correct” pile. If they get it wrong, the card goes on the “incorrect” pile. At the end it is clear to the teacher and the student if they do know all their letters or which ones they still have to learn. The teacher must shuffle the cards for the next student so the order is always random. The assessment for words is the same, with one word on each card. The sentence assessment has one sentence on each card. Similar very simple assessments can be used for Mathematics. The teacher needs a bag of stones and some cards with numbers on them. She puts out a small collection of stones for the child to count. If they get it right, she makes the collection larger. She must put out different sized collections for the next child so they cannot rely on remembering, but have to count for themselves. The teacher also shows some number cards to the student in the same way as for the letters cards. Teachers who use these assessments every month will also learn how continuous assessment works and will start to realize the purpose of their teaching is to help the student to learn, not just to deliver the content.

There are currently enough hours allocated to Language in each of the primary grades to allow for five hours per week to be devoted to needs-based reading and writing classes and the rest of the hours can be devoted to speaking and listening in the normal grade class. Speaking and listening is also integrated across all of the subjects, as each subject also provides many opportunities for teachers to help students develop their speaking and listening skills.

There are five hours allocated to Mathematics in Grade 3 and even more time in Grades 4 and 5. There are currently only three hours per week allocated to Mathematics in Grade 1 and four hours in Grade 2. However, part of the focus of Language in the first two years of school is to teach students the language of Mathematics. So an additional two hours from the Grade 1 Language allocation, and one hour from the Grade 2 allocation, could be used for teaching the language of Mathematics as part of the five hours of needs-based Mathematics instruction proposed here. It would be an excellent improvement to early Mathematics instruction if students spent a great deal more time talking about their understanding of number and how they represent collections and changes they make to collections.

Needs-based classes would also provide students with clear learning goals and feedback about their progress. Each student knows exactly what they have to learn to move to the next class. Every month they get feedback about how they are progressing.

It would be important to promote needs-based classes as giving students the opportunity to learn basic skills they have not had enough chance to learn. These are not remedial classes. It is likely some very clever students who missed a lot of school in Grade 1 or did not have a good teacher do not know their letters. They are likely to learn their letters very quickly and soon move to more advanced classes. It would also be important for schools to explain to parents how needs-based classes help their children to learn more quickly and effectively by making sure they know and understand the basic skills.

## Multi-grade classes

Multi-grade schools that organize needs-based Mathematics and language classes every day still face the problem of how to deliver the rest of the curriculum. They need the support of supplementary Teacher Guides and textbooks that focus on teaching in multi-grade classes.

## Recommendations

- 5.1 Mandate one hour per day of needs-based reading and writing instruction in all primary schools to be conducted at the same time. Each teacher in the school takes one class. Develop a simple, practical assessment that teachers use to put students in a letter, words or sentences class and monitor their progress every month. As students master the skills in one class, they move to a more advanced class.
- 5.2 Develop learning outcomes, Teacher Guides and textbooks to support three levels of needs-based instruction in reading and writing in primary schools: letters, words and sentences. Ensure reading comprehension is also taught in the needs-based Language classes by the teacher reading books of appropriate level of difficulty for each class aloud to students and discussing the meaning with students.
- 5.3 Adopt the approach outlined above for Mathematics for one hour per day. Investigate allocating two hours from Language in Grade 1 and one hour from Language in Grade 2 to integrated Language in Mathematics so there are five hours available per week for needs-based Mathematics classes.
- 5.4 Develop learning outcomes, Teacher Guides and textbooks to support three levels of needs-based instruction in Mathematics in primary schools.
- 5.5 Conduct a small-scale trial of recommendations 5.1 to 5.4 to monitor their effectiveness and feasibility and refine the process as necessary in light of results.
- 5.6 Improve the ways ASLO can be used to monitor student achievement and inform curriculum development.
  - 5.6.1 Create separate assessments of each of the three language components in ASLO: one assessment for reading, one for writing (report separately within writing on questions that require students to generate writing and questions about the technical skills of spelling, punctuation and grammar), and one for speaking and listening (report separately on speaking and listening questions).
  - 5.6.2 Create three separate sets of level descriptions for Language: one for reading, one for writing and one for speaking and listening that are based on the difficulty of the questions. Base the Mathematics described levels on the difficulty of the questions. Clearly identify where the cut points are in each of these level descriptions that separate functional from pre-functional and independent.

- 5.63 Ensure the ASLO test design and questions clearly reflect the new Lao teaching and learning model with a focus on understanding and applying skills, and that each question is clearly linked to one of the new learning outcomes. Provide reports that show this for system leaders and teachers.
- 5.7 Develop supplementary Teacher Guides and textbooks to specifically support teachers in multi-grades. Investigate providing additional resources to these teachers.

## 6. Teacher Guides and textbooks

All teachers everywhere in the world, including highly educated, experienced teachers working in countries with high levels of literacy and numeracy, need extensive support to interpret the learning outcomes in the curriculum. These resources might include textbooks, teaching and learning packages, training opportunities, books and articles or mentoring and supervision from experts.

The curriculum is a guide. Any learning outcomes, no matter how carefully they are worded, are open to a wide range of possible interpretations. Most teachers in Lao PDR have little access to curriculum resources and training opportunities outside of college. This means teachers in Lao PDR need lesson plans, or other very clear directions, to show them how to teach the learning outcomes in the curriculum day-by-day, as well as how to assess student learning. This is best provided in the Teacher Guides and textbooks which, in effect, are the curriculum for the teacher. It is essential that these resources are of the highest quality. They need to be clearly linked to the learning outcomes and provide detailed lesson plans that support the teacher to teach according to the model of teaching and learning adopted by Lao PDR, and to teach with understanding.

The Teacher Guides also need to provide explicit directions to teachers about how to assess students' learning and monitor their progress. There should be sufficient direction in the Teacher Guides and textbooks to support teachers with minimal training, but also some flexibility to allow competent, skilled teachers to adapt the plans to suit the context of their class. The teacher needs to be able to show how their adaptations link to the learning outcomes and reflect the new teaching and learning model that Lao PDR adopts.

### Recommendations

- 6.1 Investigate effective models of Teacher Guides and textbooks in use in countries with similar contexts to Lao PDR.
- 6.2 Draw on the effective models identified in 6.1 to revise and expand the Teacher Guides and textbooks for Language, Mathematics and the World Around Us to provide detailed models of daily lesson plans and assessments for teachers to use, or adapt following guidelines for adaptation. Clearly link the lesson plans and

- assessments to the new learning outcomes and design activities that focus on students understanding and applying their skills in everyday contexts.
- 63 Revise the Teacher Guides and textbooks for Moral Education, Physical Education, Handicrafts, Music and Art after the revisions in 6.2 have been tested and implemented. Note that any revisions should reflect the reality that most students will not be reading independently in Lao PDR in Grades 1, 2 or 3. It will take them at least three years to learn to read with understanding.
  - 64 Provide sufficient training so that teachers, principals and District Pedagogical Advisors understand how to use the new Teacher Guides and textbooks and assessments and why they need to move to the new model of teaching and learning.
  - 65 Build on the current innovations in assessment including the use of rubrics being tested by RIES and incorporate effective assessment practices into the revised Teacher Guides and textbooks.
  - 66 Involve expert teachers (possibly from model schools) in the development of the Teacher Guides and textbooks and assessments to ensure the materials are practical to implement.
  - 67 Test the revised Teacher Guides and textbooks and training support on a small scale to establish the most effective ways of implementing these major changes to teacher practice.
  - 68 Develop supplementary teaching and learning resources and assessments that show teachers how to incorporate local content into subjects such as Moral Education, Physical Education, Handicrafts, Music and Art.
  - 69 Provide supplementary Teacher Guides and additional resources for teachers in multi-grades that show how to cater for the different grades in their class.
  - 6.10 Investigate how to assess teachers to ensure they are delivering an effective teaching and learning program.

## **7. Crowded curriculum**

The Lao PDR primary curriculum is crowded. There are many learning outcomes, especially for the subjects that are only allocated a small amount of weekly time. A better balance between the learning outcomes and the time available for learning is preferable. The difficulty and time students typically take to achieve a learning outcome needs to be considered as well as the actual number of learning outcomes.

Mathematics only has a few hours in the early grades and probably needs more time and a larger number of more detailed learning outcomes, including learning outcomes that focus on cognitive processes, to provide more guidance about what students need to learn in each grade.

Language is allocated a large amount of time, especially in the early grades. The needs-based learning model recommended earlier would also provide clear directions about how this time should be divided between reading, writing, and speaking and listening. Language also needs a larger number of more detailed learning outcomes to describe the specific skills students need in order to learn how to read and how to write.

Integrating some subjects with the World Around Us could reduce the number of learning outcomes and also support students' learning by providing more opportunities for them to apply a range of skills, including language and mathematical skills, in a variety of contexts.

### **Recommendations**

- 71 Create a better balance in the number and difficulty of the learning outcomes and the time allowed in the curriculum for each subject.
- 72 Increase the detail and number of learning outcomes for reading, writing, speaking and listening and Mathematics so each learning outcome describes more specific skills and understanding.
- 73 Investigate the feasibility of implementing an integrated curriculum for the WorldAround Us, that might integrate Moral Education, Art, Music and Handicraft. Language and Mathematics should be kept as separate core subjects, with an integrated subject providing opportunities for students to apply their language and Mathematics skills in real-life contexts.

## 9. DRAFT WORK PLAN

This chapter outlines a draft work plan that arose from the presentation of the review findings and recommendations to RIES staff and donor organizations at a one-day workshop. The workshop was held on July 15, 2015, in Vientiane, and was attended by 35 senior MOES staff, senior staff from RIES, Teacher Training Colleges and preschool education as well as development partners including Japan International Cooperation Agency (JICA), Basic Education Quality and Access in Lao PDR (BEQUAL), World Vision, UN Woman, Plan International, Save the Children, UNICEF, World Bank, Australian Department of Foreign Affairs and Trade (DFAT), Room to Read, and United Nations Population Fund. Dr. Onekeo Nuannavong chaired the workshop.

### Draft work plan

1. Describe the overarching purpose of education, investigate possible models of teaching and learning, and investigate existing continua for Language and Mathematics that might be adapted for Lao PDR. These things need to be completed before the learning outcomes are revised.
2. Appoint a coordinator to identify and liaise with all stakeholders and ensure they are consulted during the process of selecting a suitable model of teaching and learning for Lao PDR and suitable developmental continua, as well as the revision of the learning outcomes.
3. Focus on revising the learning outcomes for Language and Mathematics first and review the effectiveness of the process before revising the learning outcomes for the World Around Us and then for other subjects. Commit to a gradual process of change.
4. Recruit a change management expert to identify effective strategies to manage the extensive changes required across all facets of education to implement the proposed changes to Language and Mathematics.
5. Recruit senior staff in RIES with expert understanding of how children learn reading, writing, speaking and listening, and Mathematics from the very beginning.
6. Recruit senior staff in RIES and Teacher Training with proven expertise and success in teaching children to read, to write with understanding, and to understand Mathematics; and to develop assessments of students' understanding.
7. Support new staff to work with existing staff in RIES and Teacher Training to identify a recommended model of teaching and learning for Lao PDR and developmental continua for Language and Mathematics and the feasibility of running needs-based classes for Language for one hour per day and for Mathematics for one hour a day.
8. Work with relevant bodies and VEDC to strengthen the focus on teaching children to speak Lao through preschool programs, village playgroups and mother education programs so all children start school able to speak basic Lao.



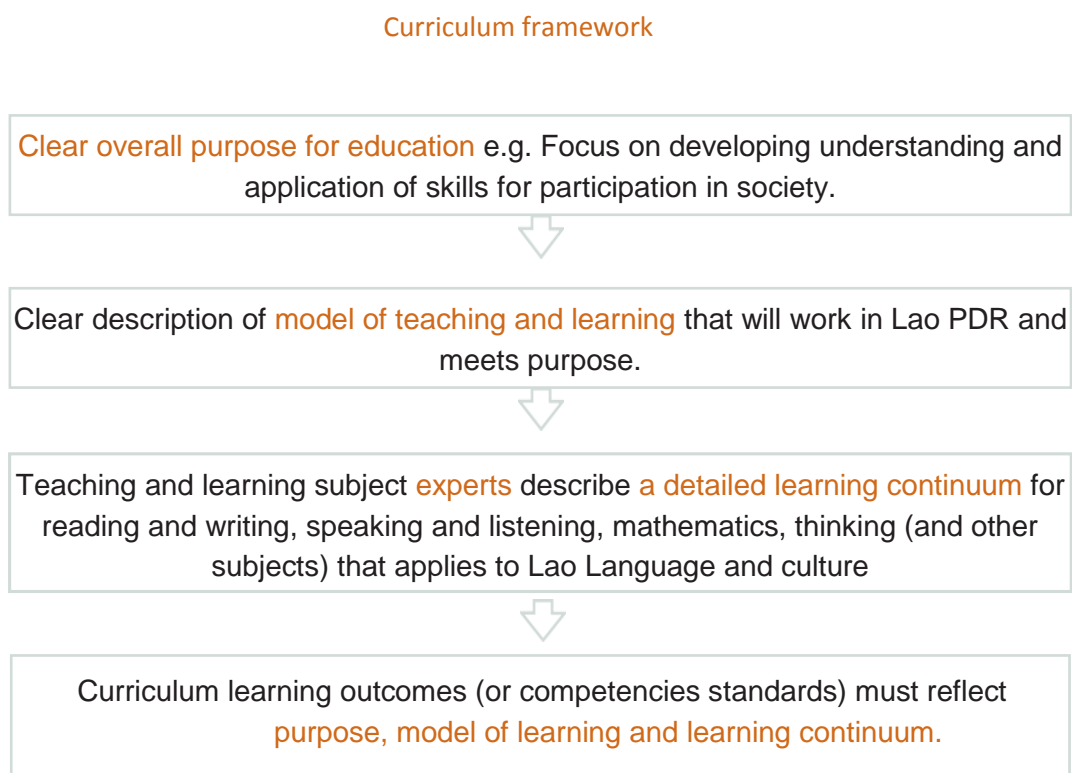
9. Consult with stakeholders over the recommended model of teaching and learning and developmental continua and the idea of needs-based classes for Language and Mathematics. Identify resources that may have been developed in past interventions that might be reusable.
10. Draft revised learning outcomes for Language and Mathematics that are based on the developmental continua, designed for the needs-based classes and reflect the new model of teaching and learning.
11. Develop draft lessons and assessments for the Teacher Guides and textbooks that show how to teach to each of the new learning outcomes.
12. Increase the value and usefulness of the ASLO data.
  - a. Create and report on three separate Language tests: (1) reading, (2) writing, and (3) speaking and listening. Three separate tests will provide accurate information about student achievement. (The current ASLO Language data show most students demonstrate many of the speaking and listening skills, some of the reading skills and few of the writing skills.)
  - b. Link each of the ASLO test items to the new learning outcomes. Ensure the focus of the test items is on assessing understanding and not on memorization.
  - c. Redraft the described levels of difficulty so that there are three separate sets of descriptions for Language: (1) reading, (2) writing, (3) speaking and listening. Mathematics has a separate set of described levels. Match the skills described in each of the levels to the actual difficulty of the items. Make the cut points between functional, pre-functional and independent transparent on the described levels of difficulty.
13. Investigate new ways to assess teachers that are based on how well students learn, rather than how well teachers deliver the curriculum.
14. Identify potential model schools attached to each of the Teacher Training Colleges.
15. Recruit expert principals and expert teachers who have proven expertise in teaching in a model that supports students' understanding. Teachers are to teach the new learning outcomes and use the draft lessons and assessments. Donor organization support may be required to help teachers work according to the model of teaching and learning that Lao PDR adopts. Students should be assessed before, during and at the end of the year, using reputable separate assessments of reading, writing, speaking and Mathematics to identify if they are improving. The assessments must focus on students understanding what they have learned. Test new methods of assessing teachers.
16. Revise the learning outcomes, the model of teaching and learning, draft lesson plans and student and teacher assessments according to feedback from the model schools.
17. Produce more lesson plans and finalize the Teacher Guides and textbooks and teacher assessments.

18. Use the model schools to train new teachers in the new teaching pedagogies, for experienced teachers to observe how to teach to the new learning outcomes, and for experienced principals to understand how schools need to change. Video teachers in the model schools and use mobile phones to deliver sample lessons to remote teachers.
19. Plan for a large-scale roll-out of the revised Teacher Guides, textbooks and student and teacher assessments, including appropriate training and support for teachers in how to teach and assess students and for District Pedagogical Advisors and principals to understand how schools need to change and how to assess teachers.

### Curriculum framework: Overarching issues

The learning outcomes in a curriculum sit within a larger framework as shown in Figure 7. Before the learning outcomes are revised, key features of education in Lao PDR need to be clarified.

Figure 7: Curriculum framework: Overarching issues



The overarching purpose of education needs to be defined so it can provide clear guidelines about the sort of teaching and learning that Lao PDR wants. If the focus is on students understanding and being able to apply the skills they learn in order to function in Lao society, this should be clearly stated in the overarching purpose.

Student-centered learning is too broad a term. It has many different interpretations. Lao PDR needs a clear description of a model of teaching and learning that is practical and effective for

Lao PDR. This model needs to be identified and described before learning outcomes are developed.

Before the learning outcomes are developed, there needs to be a clear description of the progressive development of students' skills in the key areas of Language and Mathematics, starting from when students start to learn about text and numbers or speaking in Lao. The first phase of reform of the learning outcomes should focus on Language and Mathematics. Continua for the other subjects can be developed in a later phase.

The new learning outcomes should be based on the continua described for reading, writing, speaking and listening, and mathematics, and should reflect the teaching and learning model that Lao PDR adopts as well as the overarching purpose of education.

### **Consultation**

Involvement in curriculum reform at the grass roots level is critical to its success, as the people who are delivering the reform—the principals, teachers and District Pedagogical Advisors and the parents who support it by sending their children to school—need to understand the reform and to have been consulted to ensure that the reform is practical and feasible. It is important to find constructive and effective ways to involve these people.

At the same time as the curriculum framework review proceeds, MOES could investigate how to support the involvement of key stakeholders. This is likely to require the appointment of a senior staff member to liaise with representatives from pre-primary, primary, RIES, ESQAC, Teacher Education, District Pedagogical Advisors, expert teachers and VEDC to ensure they are consulted and engaged in the process of development and refinement of the new teaching and learning model for Lao PDR and the learning outcomes.

### **Expertise**

RIES has many staff with excellent subject specialist knowledge, but few staff with a deep understanding of how young children learn to read, write and understand mathematics. It will be critical to the success of the learning outcome reforms for RIES to appoint some early childhood staff with extensive knowledge of how children learn these basic skills as well as proven expertise in how to teach reading, writing and mathematics effectively in contexts with limited resources.

There are few expert teachers in RIES or in the Teacher Training Colleges who know how to teach in a style that helps students understand and apply their skills in everyday contexts in classes with limited resources. It will also be critical to the success of learning outcome reforms for RIES and the Teacher Training Colleges to appoint some expert teachers with proven ability to teach in a style that is effective in helping most students in the class learn to read, write and understand mathematics. It may be necessary to provide support to expert teachers in Lao PDR to help them build and develop their teaching skills and then recruit them to RIES and the Teacher Training

Colleges. RIES and Teacher Training staff need to be able to demonstrate effective teaching and learning strategies that support the revised learning outcomes by taking classes. Demonstration lessons can be videoed and circulated over mobile phones to help rural teachers to understand how to teach.

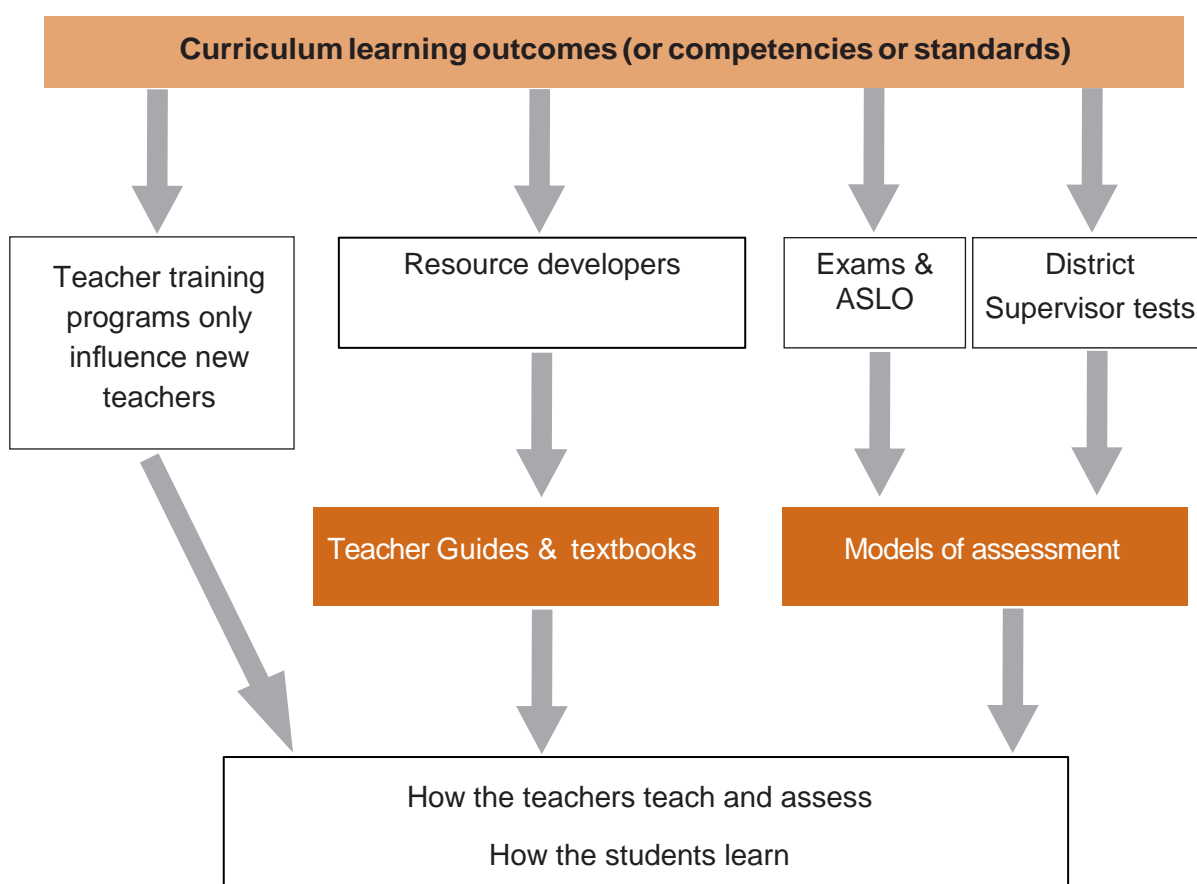
### Pre-primary

Close collaboration with pre-primary is also essential in the reform of the primary learning outcomes. It was felt there may be useful lessons from the way pre-primary is organized that could be applied to Grade 1. Pre-primary is seen as an enjoyable learning environment and the thematic approach to learning encourages students to develop a holistic understanding of how speaking and listening and reading and writing are interrelated and how they can be used to model mathematics.

### Curriculum framework: Below the learning outcomes

The learning outcomes impact many aspects of education, as shown in Figure 8.

Figure 8: Curriculum framework: Below the learning outcomes



Teacher training programs need to focus on helping new teachers understand the learning outcomes and how to teach them. However, teacher training only influences new teachers. The learning outcomes also influence the resource developers who produce the essential curriculum support materials that all teachers require to help them to implement the curriculum. In Lao PDR the curriculum support materials are the Teacher Guides and textbooks, so it is essential that these documents are of the highest quality and model exactly the kind of teaching and learning and assessment practices that are desired. All the lessons should be clearly linked back to learning outcomes. The questions in ASLO and other examinations should also be clearly linked to the learning outcomes and reflect the new Lao PDR model of teaching and learning. District supervisor assessments and teacher assessments should similarly reflect the focus on students understanding and match back to learning outcomes. It may be necessary to insist teachers use the assessments provided with the Teacher Guides and textbooks and not use their own assessments.

There was a perception that some teachers write tests that reinforce rote learning and these teachers then claim that almost all their students scored 100% in order to avoid having to provide additional remedial work. If this practice is not stopped, then the revised learning outcomes will fail.

It is critical that students are rewarded for working hard to understand what they are learning and not rewarded for simply memorizing the answers to the teachers' questions. Teachers also need to understand it is their job to ensure students really understand what they are learning.

### **Model schools**

Model schools attached to each of the Teacher Training Colleges are established to:

- Recruit expert principals and teachers to the model schools who are committed to working with the new pedagogies and provide additional professional training and support to explain how to use the draft Teacher Guides, textbooks and assessments.
- Demonstrate that it is possible to succeed with the new pedagogies while using only the kinds of resources that it is realistic to expect most schools in Lao PDR have.
- Engage District Pedagogical Advisors, VEDC and the local community in the new approach to teaching Language and Mathematics and get their feedback.
- Test the draft Teacher Guides, textbooks and assessments, get feedback and revise accordingly.

It is important to prove that the new model is more effective. Students should be assessed with high quality assessments at the start, during, and at the end of the first year to demonstrate their skills have improved. The assessments must link to the new draft learning outcomes and reflect the new focus on students understanding and applying skills, and not reward memorization.

Once the model schools have been established and proven to be effective, they can be used to provide experience to trainee teachers in how to teach to the new Lao PDR teaching and learning

model and to show teachers and principals from other schools how the model works in practice. Short videos of expert teachers conducting effective lessons can be also be distributed to rural teachers over mobile phones.

### **English**

Given that it is likely most students in Lao PDR will take at least three to four years to begin to start reading independently in Lao, it is recommended that learning to read in English is delayed until secondary school. Students can start learning to speak English in primary school, but it would be preferable for them to have consolidated their understanding of how to read in Lao before they start learning how to read in English. There were comments that many children currently become confused as they are simultaneously learning to read in two different languages. Students need to first learn how to read in one language, then they can transfer these skills to learning to read other languages.

If a needs-based language program is adopted, students in the sentences class could possibly start learning to read in English.

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# APPENDICES

## Appendix One: Summary of responses from meetings and interviews

People interviewed:

- Mr Kheun Xaysanavongxay, Deputy Director-General, Department of Preschool and Primary Education
- Mrs Siphaphone Manivanh, Deputy Director General, Preschool and Primary Education Department
- Mr Vanxay Noraseng, Director, Educational Standards and Quality Assurance Centre
- Ms Keomanivanh Phimmahaxay, Deputy Director, Department of Secondary Education
- Mr Thongkeo Keoasa, Deputy Director, Research Institute for Educational Sciences
- Mr Chanhdy Phommabouth, General Director, Teacher Training Department
- Primary school teachers, Hinherb District, Vientiane Province
- District Pedagogy Advisors, Hinherb District, Vientiane Province

Summary of responses

### Teacher training

The alignment between Teacher Training Colleges and how teachers are training and the primary and secondary curriculum needs strengthening, including a greater focus on learning how school-aged students learn and progress in different subjects and teaching strategies that effectively support learning.

Pre-primary curriculum (PPC) – early learning in primary schools. We select teachers to be the PPC teachers. We train them on how to use the PPC curriculum. We have no documentation to monitor this.

We need to develop teaching and learning methodologies that are learner-centered and teach critical-thinking skills.

### Local curriculum

Localized curriculum is part of MOES' policy. Schools require greater support to develop and implement locally relevant curriculum. The implementation of local curriculum should be clearly guided in terms of time allocation, content and practices. Learning outcomes should be clearly identified.

### Multi-grade classes

Teachers who are teaching multi-grade classes require teaching materials, facilities and resources to support learning across multiple year levels.

We need to provide resources to our schools and teachers that support student learning.

Teachers teaching multi-grade classes need to work across a number of Teacher Guides and textbooks. These resources are not easily aligned across year levels.

Allocating time to subjects is an issue that some teachers experience when teaching multiple grades.

Access to training and support is limited.

### **Alignment of early childhood and Grade 1 curriculum**

Additional coordination and alignment is required between early childhood, primary and secondary curriculum development.

The early childhood curriculum is based on school readiness competencies across five domains: physical safety and health, language development, general knowledge and cognitive development, emotional development, and social development. Teachers use a monitoring checklist for students.

The Grade 1 curriculum does not connect directly to the early childhood curriculum. Grade 1 should have a greater focus on child development. We need to understand our students' physical and emotional development, not just cognitive development.

Year 1 teachers need to have skills to organize learning for early childhood. In kindergarten student learning is active. In Year 1 student learning is passive.

### **Lao Language**

We need to provide schools and teachers with more information and support. Presently we do not have a formal structure to support the teaching of Lao Language to children who are in pre-reading/pre-writing phases of development and for those whose first exposure to Lao language may be when they commence school.

### **Developing capability**

It is important that we invest in our school leaders to ensure they have the curriculum and teaching expertise to lead their schools.

It is important that we invest in training our pedagogy advisors to ensure they have the curriculum and teaching expertise to support teaching and improve teaching.

We need to develop teaching and learning methodologies that are learner-centered.

We need to develop our skills and expertise in ways to monitor student learning and progress, and strategies to address and support learning difficulties.

We need a more consistent approach to requirements for teacher lesson planning. Many teachers have difficulty planning lessons to meet the needs of students in their classrooms.

### **Other**

The access teachers have to resources is an issue.

Reporting to MOES from provinces needs to be in a more consistent format using data and information that is verified.

We need to rethink our standards to reflect what kind of learning and skills we want our students to master.

A review of textbook distribution should be carried out to identify where issues are occurring and how these can be addressed.

The current design of textbooks is more suitable for teachers than students.

Many schools have insufficient resources to support the teaching of reading and to provide reading materials for students in school as well as at home.

Many schools do not have ready access to hands-on materials to support learning in subjects such as Mathematics.

## Appendix Two: Overarching aims for education and guiding principles in Hong Kong

Hong Kong National Curriculum Overall Aims	Hong Kong National Curriculum Guiding Principles
<ul style="list-style-type: none"> <li>• The school curriculum should provide all students with essential life-long learning experiences for whole-person development in the domains of ethics, intellect, physical development, social skills and aesthetics, according to individual potential, so that all students can become active, responsible and contributing members of the society, the nation and the world.</li> <li>• The school curriculum should help students learn how to learn through cultivating positive values, attitudes and a commitment to life-long learning, and through developing generic skills to acquire, construct and communicate knowledge. These qualities are essential for whole-person development to cope with the challenges of the 21st Century.</li> <li>• A quality curriculum for the 21st Century should therefore set the directions for learning and teaching through a coherent and flexible framework which can be adapted to changes and the different needs of students and schools.</li> </ul>	<ul style="list-style-type: none"> <li>• The overarching principle is to help students learn how to learn.</li> <li>• All students have the ability to learn and in order to do so they should be offered essential learning experiences.</li> <li>• A learner-focused approach should be used to make decisions in the best interests of students. Diversified learning, teaching and assessment strategies should be used to suit the different needs of students.</li> <li>• Development strategies should be built on the strengths of students, teachers, schools and the wider community of Hong Kong.</li> <li>• Practices should be adopted to achieve a balance across different purposes and conflicting interests and views, e.g. across the academic, social and economic goals of the curriculum and diverse learning and teaching strategies. The purpose and modes of learning, teaching and assessment should be consistent with one another.</li> <li>• Schools have the flexibility to design their school-based curricula to satisfy the needs of their students, so long as the requirements set out in the central curriculum framework are fulfilled.</li> <li>• Curriculum development should be a continuous improvement process to help students learn better.</li> <li>• Positive thinking, with patience, celebration of small successes and tolerance of ambiguity are essential to ensuring the sustainability of change and improvement.</li> </ul>

### Appendix Three: Overarching aims for education and guiding principles in Madhya Pradesh

Madhya Pradesh National Curriculum Overall Aims <sup>54</sup>	Madhya Pradesh National Curriculum Guiding Principles <sup>55</sup>
<p>The National Curriculum Framework taking cues from ‘Learning without Burden’ (1993) and seeking guidance from the Constitutional vision of India as a secular, egalitarian and pluralistic society, founded on the values of social justice and equality, identifies certain broad aims of education.</p> <p>These include:</p> <ul style="list-style-type: none"> <li>• independence of thought and action</li> <li>• sensitivity to others’ wellbeing and feelings</li> <li>• learning to respond to new situations in a flexible and creative manner</li> <li>• pre-disposition towards participation in democratic processes and the ability to work towards and contribute to economic processes and social change.</li> </ul>	<p>The fact that learning has become a source of burden and stress on children is evidence of a deep distortion in educational aims and quality. To correct this distortion, the present National Curriculum Framework proposes five guiding principles for curriculum development:</p> <ul style="list-style-type: none"> <li>• connecting knowledge to life outside the school</li> <li>• ensuring that learning shifts away from rote methods</li> <li>• enriching the curriculum to provide for overall development of children rather than remaining textbook-centric</li> <li>• making examinations more flexible and integrated into classroom life</li> <li>• nurturing an overriding identity informed by caring concerns within the democratic polity of the country.</li> </ul>

<sup>54</sup> These aims articulate the focus on curriculum reform in Madhya Pradesh, ‘Learning without Burden’. The focus of reform was on reducing the burden of an overcrowded curriculum to a focus on student engagement and active involvement in learning.

<sup>55</sup> These principles describe the way forward in curriculum development in Madhya Pradesh.

**Appendix Four: Comparison of the quantum of learning across strands and sub- strands  
in Mathematics for Lao PDR and Australia**

Lao PDR Mathematics						
Strand	Sub-strands	Number of basic learning competencies by grade				
		Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Number	• Whole number	2	1	1	1	1
	• Decimals and fractions	0	1	1	1	1
	• Money	1	1	1	1	1
Operations	• Addition	1	1	1	1	1
	• Subtraction	1	1	1	1	1
	• Multiplication	0	1	1	1	1
	• Division	0	1	1	1	1
Geometry	• Two-dimensional space	2	3	3	3	3
	• Three-dimensional space	0	1	1	1	1
	• Position	1	1	1	1	1
	• Data skills	2	3	3	3	3
Measurement	• Length	2	2	3	1	1
	• Area	0	0	1	2	2
	• Mass	1	2	2	1	1
	• Capacity and volume	1	3	1	2	2
	• Temperature	0	1	1	1	1
	• Time	1	2	2	2	2
<b>Total</b>		<b>15</b>	<b>26</b>	<b>25</b>	<b>24</b>	<b>27</b>

Australian Mathematics							
Strand	Sub-strands	Number of content descriptions by grade					
		Pre-1	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Number and algebra	• Number and place value	5	4	7	7	6	5
	• Fractions and decimals	0	1	1	1	3	4
	• Money and financial mathematics	0	1	1	1	1	1
	• Patterns and algebra	1	1	1	1	3	2
Measurement and geometry	• Using units of measurement	3	3	5	2	4	3
	• Shape	1	1	2	1	2	1
	• Location and transformation	1	1	3	2	2	3
	• Geometric reasoning	0	0	0	1	1	1
Statistics and probability	• Chance	1	1	1	1	3	2
	• Data representation and interpretation	0	2	3	3	3	3
<b>Total</b>		<b>12</b>	<b>15</b>	<b>24</b>	<b>20</b>	<b>28</b>	<b>25</b>



## Appendix Five: Comparison 1 – Lao and Australian Mathematics curricula

Lao Mathematics Grade 1	Australian pre-Grade 1	Australian Grade 1
<p>Manipulate, generalize and compare the size of groups through a variety of strategies, including:</p> <ul style="list-style-type: none"> <li>combine and separate groups</li> <li>use estimating, matching one-to-one and counting</li> <li>use the language of groups, comparing and matching</li> <li>use 'less than', 'more than' and 'equal' to compare group size</li> <li>use symbols <math>&lt;</math>, <math>&gt;</math>, <math>=</math> to record results of comparison*</li> </ul>	<p>Subitize (perceive at a glance the number of items in a group) small collections of objects:</p> <ul style="list-style-type: none"> <li>using subitizing as the basis for ordering and comparing collections of numbers</li> </ul> <p>Compare, order and make correspondences between collections, initially to 20, and explain reasoning:</p> <ul style="list-style-type: none"> <li>comparing and ordering items of like and unlike characteristics using the words 'more', 'less', 'same as' and 'not the same as' and giving reasons for these answers</li> <li>understanding and using terms such as 'first' and 'second' to indicate ordinal position in a sequence.</li> </ul> <p>Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings:</p> <ul style="list-style-type: none"> <li>observing natural patterns in the world around us</li> <li>creating and describing patterns using materials, sounds, movements or drawings</li> </ul>	<p>Investigate and describe number patterns formed by skip counting and patterns with objects:</p> <ul style="list-style-type: none"> <li>using place-value patterns beyond the teens to generalize the number sequence and predict the next number</li> <li>investigating patterns in the number system, such as the occurrence of a particular digit in the numbers to 100</li> </ul>

\*Denotes an expectation in Lao Mathematics curriculum that is not evident in the Australian curriculum.

## Appendix Six: Comparison 2 – Lao and Australian Mathematics curricula

Lao Mathematics Grade 1	Australian pre-Grade 1	Australian Grade 1
<p>Count, order, represent, read and write the numbers from 0 to 100, including:</p> <ul style="list-style-type: none"> <li>• use the language of counting and ordering</li> <li>• Lao and international numerals tell the meaning of 0 count (forward and backward) and order (increasing and decreasing)</li> <li>• use ordinal numbers for sequencing</li> <li>• count forward by 2, 5 or 10 tell place value of each digit in numbers</li> <li>• tell number before or after another number</li> </ul>	<p>Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point:</p> <ul style="list-style-type: none"> <li>• reading stories from other cultures featuring counting in sequence to assist students to model ways of counting in local languages and across cultures</li> <li>• identifying the number words in sequence, backwards and forwards, and reasoning with the number sequences, establishing the language on which subsequent counting experiences can be built</li> <li>• developing fluency with forwards and backwards counting in meaningful contexts, including stories and rhymes</li> <li>• understanding that numbers are said in a particular order and there are patterns in the way we say them</li> </ul> <p>Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond understanding that each:</p> <ul style="list-style-type: none"> <li>• object must be counted only once, that the arrangement of objects does not affect how many there are, and that the last number counted answers the ‘how many’ question</li> </ul>	<p>Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by 2, 5 and 10 starting from zero:</p> <ul style="list-style-type: none"> <li>• using the popular Korean counting game (sam-yuk-gu) for skip counting</li> <li>• developing fluency with forwards and backwards counting in meaningful contexts such as circle games</li> </ul> <p>Recognize, model, read, write and order numbers to at least 100.</p> <p>Locate these numbers on a number line:</p> <ul style="list-style-type: none"> <li>• modeling numbers with a range of material and images</li> <li>• identifying numbers that are represented on a number line and placing numbers on a prepared number line</li> </ul> <p>Count collections to 100 by partitioning numbers using place value:</p> <ul style="list-style-type: none"> <li>• understanding partitioning of numbers and the importance of grouping in tens</li> </ul>

## Appendix Seven: Comparison 3 – Lao and Australian Mathematics curricula

Grade 1	
Lao curriculum – Mathematics	Australian curriculum – Mathematics
<p>Represent addition by combining groups of objects and count and record total, including:</p> <ul style="list-style-type: none"> <li>• represent by putting two groups together represent by increasing a group by a given number</li> <li>• use language of addition processes</li> <li>• write simple, horizontal addition algorithms based on materials</li> <li>• identify addition situations in number stories (demonstrate through using materials), write algorithm for addition number story</li> <li>• construct simple addition tables horizontal and vertical algorithms</li> <li>• addition of two or three numbers with sum less than 100*</li> <li>• addition with regrouping*</li> </ul> <p>Represent subtraction by separating and comparing groups of objects and count differences, including:</p> <ul style="list-style-type: none"> <li>• represent by taking away from one group represent by comparing difference in size of two groups</li> <li>• represent by counting on from one group to required number</li> <li>• use language of subtraction processes*</li> <li>• identify subtraction situations in number stories (demonstrate through using materials) use simple algorithms based on materials (no regrouping, vertical and horizontal)</li> </ul>	<p>Pre-Grade 1</p> <p>Represent practical situations to model addition and sharing:</p> <ul style="list-style-type: none"> <li>• using a range of practical strategies for adding small groups of numbers, such as visual displays or concrete materials</li> <li>• using Aboriginal and Torres Strait Islander methods of adding, including spatial patterns and reasoning</li> </ul> <p>Grade 1</p> <p>Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts:</p> <ul style="list-style-type: none"> <li>• developing a range of mental strategies for addition and subtraction problems</li> </ul>

## Appendix Seven (cont.)

Grade 2	
<p>Combine, estimate and count larger groups, and record using simple algorithms, including:</p> <ul style="list-style-type: none"> <li>• &lt;1000</li> <li>• use a simple abacus</li> <li>• use knowledge of place value in addition</li> <li>• use addition facts in simple mental calculations</li> <li>• explore adding 0</li> <li>• select addition where appropriate in problem solving*</li> <li>• construct addition tables using up to three-digit numbers</li> <li>• find missing numbers in algorithms</li> <li>• complete complex* algorithms with brackets</li> </ul> <p>Separate and compare larger groups, including:</p> <ul style="list-style-type: none"> <li>• groups of materials or numbers</li> <li>• estimate before counting</li> <li>• three-digit numbers</li> <li>• use a simple abacus</li> <li>• use knowledge of place value in subtraction</li> <li>• use subtraction facts in simple mental calculations</li> <li>• explore subtracting 0</li> <li>• select subtraction where appropriate in problem solving</li> <li>• use regrouping in calculations</li> </ul>	<p>Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting:</p> <ul style="list-style-type: none"> <li>• using an abacus to model and represent numbers</li> <li>• understanding three-digit numbers as comprised of hundreds, tens and ones/units</li> <li>• demonstrating and using models such as linking blocks, sticks in bundles, place-value blocks and Aboriginal bead strings and explaining reasoning</li> </ul> <p>Explore the connection between addition and subtraction:</p> <ul style="list-style-type: none"> <li>• becoming fluent with partitioning numbers to understand the connection between addition and subtraction using counting on to identify the missing element in an additive problem.</li> </ul> <p>Solve simple addition and subtraction problems using a range of efficient mental and written strategies:</p> <ul style="list-style-type: none"> <li>• becoming fluent with a range of mental strategies for addition and subtraction problems, such as commutativity for addition, building to 10, doubles, 10 facts and adding 10</li> <li>• modeling and representing simple additive situations using materials such as 10 frames, 20 frames and empty number lines</li> </ul>

## Appendix Seven (cont.)

Grade 3	
<p>Combine, estimate, count and represent larger groups and record using simple algorithms, including:</p> <ul style="list-style-type: none"> <li>• &lt;5 digit numbers</li> <li>• use addition facts in more complex mental calculations*</li> <li>• use technique for addition of many numbers</li> </ul> <p>Select and use mental and written strategies to estimate and subtract, including:</p> <ul style="list-style-type: none"> <li>• &lt;5 digit numbers</li> <li>• write algorithm of number story</li> <li>• use regrouping technique</li> <li>• use addition to check answer</li> </ul>	<p>Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems:</p> <ul style="list-style-type: none"> <li>• recognizing that 10 000 equals 10 thousands, 100 hundreds, 1000 tens and 10 000 ones</li> <li>• justifying choices about partitioning and regrouping numbers in terms of their usefulness for particular calculations</li> </ul> <p>Recognize and explain the connection between addition and subtraction:</p> <ul style="list-style-type: none"> <li>• demonstrating the connection between addition and subtraction using partitioning or by writing equivalent number sentences.</li> </ul> <p>Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation:</p> <ul style="list-style-type: none"> <li>• recognizing that certain single-digit number combinations always result in the same answer for addition and subtraction, and using this knowledge for addition and subtraction of larger numbers</li> <li>• combining knowledge of addition and subtraction facts and partitioning to aid computation (for example <math>57 + 19 = 57 + 20 - 1</math>)</li> </ul>

\*Denotes an expectation in Lao Mathematics curriculum that is not evident in the Australian curriculum.

## Appendix Eight: Strands and sub-strands for Lao Language and Thai

Lao Language	Thai language
<p>Strand</p> <ul style="list-style-type: none"> <li>• Speaking and listening</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Applying speaking and listening</li> <li>• Skills and strategies</li> </ul>	<p>Strand</p> <ul style="list-style-type: none"> <li>• Listening, viewing and speaking</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Competency in critical listening and viewing, and in critical and creative expression of knowledge, thoughts and feelings on various occasions</li> </ul>
<p>Strand</p> <ul style="list-style-type: none"> <li>• Reading</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Reading texts</li> <li>• Skills and strategies</li> </ul>	<p>Strand</p> <ul style="list-style-type: none"> <li>• Reading</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Application of reading process to build knowledge and thoughts for decision-making and problem solving to life, and encouraging acquisition of reading habit</li> </ul>
<p>Strand</p> <ul style="list-style-type: none"> <li>• Writing</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Writing texts</li> <li>• Grammar and punctuation</li> <li>• Spelling</li> <li>• Handwriting</li> </ul>	<p>Strand</p> <ul style="list-style-type: none"> <li>• Writing</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Effective application of writing process for communications, compositions, synopses, stories in various forms, data and information reports, study reports and research reports</li> </ul>
	<p>Strand</p> <ul style="list-style-type: none"> <li>• Principles of usage of Thai language</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Understanding of the nature and the principles of Thai language, linguistic changes and power, linguistic wisdom and preservation of Thai language as national treasure</li> </ul>
	<p>Strand</p> <ul style="list-style-type: none"> <li>• Literature and literacy works</li> </ul> <p>Sub-strand</p> <ul style="list-style-type: none"> <li>• Understanding and expressing opinions; criticism of Thai literature and literary works through appreciative approach; and application to real life</li> </ul>

## Appendix Nine: Ontario English strand, sub-strand and specific expectations by sub-strand

Strand	Sub-strand	Specific expectations for each sub-strand
Oral communication	Listening to understand	<ul style="list-style-type: none"> <li>Purpose</li> <li>Active listening strategies</li> <li>Comprehension strategies</li> <li>Demonstrating understanding</li> <li>Making inferences/interpreting texts</li> <li>Extending understanding</li> <li>Analyzing texts</li> <li>Point of view</li> <li>Presentation strategies</li> </ul>
	Speaking to communicate	<ul style="list-style-type: none"> <li>Purpose</li> <li>Interactive strategies</li> <li>Clarity and coherence</li> <li>Appropriate language</li> <li>Vocal skills and strategies</li> <li>Non-verbal cues</li> <li>Visual aids</li> </ul>
	Reflecting on oral communication skills and strategies	<ul style="list-style-type: none"> <li>Metacognition</li> <li>Interconnected skills</li> </ul>
Reading	Reading for meaning	<ul style="list-style-type: none"> <li>Variety of texts</li> <li>Purpose</li> <li>Comprehension strategies</li> <li>Demonstrating understanding</li> <li>Making inferences/interpreting texts</li> <li>Extending understanding</li> <li>Analyzing texts</li> <li>Responding to and evaluating texts</li> <li>Point of view</li> </ul>
	Understanding form and style	<ul style="list-style-type: none"> <li>Text forms</li> <li>Text patterns</li> <li>Text features</li> <li>Elements of style</li> </ul>
	Reading with fluency	<ul style="list-style-type: none"> <li>Reading familiar words</li> <li>Reading unfamiliar words</li> <li>Reading fluency</li> </ul>
	Reflecting on reading skills and fluency	<ul style="list-style-type: none"> <li>Metacognition</li> <li>Interconnected skills</li> </ul>

## Appendix Nine (cont.)

Strand	Sub-strand	Specific expectations for each sub-strand
Writing	Developing and organizing content	Purpose and audience Developing ideas Research Classifying ideas Organizing ideas Review
	Using knowledge of form and style in writing	Form Voice Word choice Sentence fluency Point of view Preparing for revision Revision Producing drafts
	Applying knowledge of language conventions and presenting written work effectively	Spelling familiar words Spelling unfamiliar words Vocabulary Punctuation Grammar Proofreading Publishing Producing finished works
	Reflecting on writing skills and strategies	Metacognition Interconnected skills Portfolio
Media literacy	Understanding media texts	Purpose and audience Making inferences/interpreting messages Responding to and evaluating texts Audience responses Point of view Production perspectives
	Understanding media forms, conventions, techniques	Form Conventions and techniques
	Creating media texts	Purpose and audience Form Conventions and techniques Producing media texts
	Reflecting on media literacy skills and strategies	Metacognition Interconnected skills



**Appendix Ten: The time allocated to each of the nine subjects, classroom and school activities and extracurricular activities**

Subjects	Hours per week and school year									
	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5	
	Week	Year	Week	Year	Week	Year	Week	Year	Week	Year
Lao Language	12	396	10	330	8	264	6	198	6	198
Mathematics	3	99	4	132	5	165	6	198	6	198
Moral Education	1	33	1	33	1	33	1	33	1	33
World Around Us	2	66	2	66	2	66	3	99	3	99
Art	1	33	1	33	1	33	1	33	1	33
Music	1	33	1	33	1	33	1	33	1	33
Handicraft	1	33	2	66	2	66	2	66	2	66
Physical Education	2	66	2	66	2	66	2	66	2	66
Foreign Language (English)	0	0	0	0	2	66	2	66	2	66
Sub total	23	759	23	759	23	792	24	792	24	792
Class and school activities	2	66	2	66	2	66	2	66	2	66
Total	25	825	25	825	26	858	26	858	26	858
Extracurricular activities	3 hours per month									

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