LADLF Laos-Australia DEVELOPMENT LEARNING FACILITY
An Australian Aid project managed by Adam Smith International

# Rapid Appraisal of Literature on Multigrade Teaching in ASEAN and Other Countries

**Final Version**

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# Acronyms / Abbreviations

| | |
|---|---|
| **ASEAN** | Association of Southeast Asian Nations |
| **ASLO III** | National Assessment of Student Learning Outcomes (2013) |
| **BEQUAL** | Basic Education Quality and Access in Lao PDR |
| **DFAT** | Department of Foreign Affairs and Trade |
| **LADLF** | Lao-Australia Development Learning Facility |
| **MOES** | Ministry of Education and Sports |
| **MDG** | Millennium Development Goals |
| **NAPLAN** | National Assessment Program - Literacy and Numeracy |
| **OECD** | Organisation for Economic Co-operation and Development |
| **PISA** | Programme for International Student Assessment |
| **SDG** | Sustainable Development Goals |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organisation |
| **UNICEF** | United Nations Children's Fund |

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The views expressed in this report are those of the authors (LADLF) and do not necessarily reflect the views and policies of the Adam Smith International, DFAT or the Government of Lao PDR. All errors are the authors' own.

# Executive Summary

The purpose of this rapid appraisal of literature on multigrade teaching in ASEAN and other countries is to contribute to strategic thinking and planning for the Basic Education Quality and Access in Lao PDR (BEQUAL) program. This rapid appraisal prioritised literature produced in English over the last decade from ASEAN and other regions of relevance to Lao PDR. It builds on an earlier rapid appraisal produced by the Laos Australia Development Learning Facility (LADLF, 2016).

Multigrade classes are a common feature in primary schools in many ASEAN countries, including Lao PDR. They are primarily used as a drive to achieve universal primary education, corresponding to Millennium Development Goal (MDG) 4 and Sustainable Development Goal (SDG) 2, in rural and remote areas. Many developing countries, including Lao PDR, face significant challenges in employing multigrade teaching as a strategy to achieve education access and deliver learning outcomes.

In developed countries, multigrade teaching is both a pedagogical choice and an effective measure to provide access to quality education in remote and rural areas. In these contexts, multigrade teaching present two key features: a holistic teaching approach and appropriate resources (supply of skilled teachers, curriculum and materials) to facilitate good teaching practice.

Multigrade teaching is widely perceived throughout ASEAN countries, including Lao PDR, as providing sub-optimal education resulting in poor student learning outcomes. However, this perception is not substantiated by evidence: there is limited comparative research on student learning outcomes in monograde and multigrade classrooms. It rather appears to be based on two misconceptions:

1. Many ASEAN and developing countries utilise teaching in a multigrade classroom, rather multigrade teaching as a distinct pedagogy;
2. Most multigrade classrooms are in rural and remote areas, where the poor learning outcomes of students are attributed to multigrade teaching method. In this way, this pedagogy is often confused with causing poor learning outcomes.

Studies from both ASEAN and other countries suggest that multigrade classrooms and teaching do not necessarily result in poorer learning outcomes. For instance, remote and rural schools in Colombia where multigrade teaching is used, have achieved positive student learning outcomes. The international literature also indicates that there is a strong relationship between poor student learning outcomes and rural and remoteness, rather than poor learning outcomes being a by-product of multigrade teaching.

Teaching in multigrade classrooms is one option for ensuring access to education in sparsely populated areas. To be effective, it requires additional teaching resources and skilled teachers, both of which are scarce in rural and remote areas. The findings from this rapid appraisal emphasise the need for further inquiry to better inform strategies to improve the quality of schooling in small, remote and rural schools in Lao PDR.

Lessons from the international literature for multigrade teaching in Lao PDR are:

1. Address existing teacher beliefs and inherent policy prejudices about student learning in a multigrade classroom and teaching methods to reduce resistance to any change program.

2. Consider a national multigrade curriculum and lesson plans to assist teachers with their teaching responsibilities in the classroom, such as the framework developed by the Office of the Basic Education Commission of Thailand.

3. Learn from the flexible strategies for multigrade teaching in remote and ethnic areas developed in the modified national curriculum focusing on language acquisition and maths for multigrade classrooms in Vietnam.

4. Incorporate specific features of multigrade teaching into resource planning - such as teacher allocation, lesson structures and planning, infrastructure and school planning - in addition to pre- and in-service teacher training in multigrade teaching pedagogy, and along with multigrade teaching resources for teaching Lao language and maths.

5. Prioritise adequate resourcing of learning materials for multigrade classes, recognising that provision of these materials to rural and remote areas is likely to be more costly than urban areas.

6. Explore forms of student grouping for multigrade teaching practiced in other Asian countries, including organising students per groups based on their abilities within or across grades or grouping students into mixed-ability groups.

7. Develop and support the implementation of a flexible assessment framework that caters specifically to the needs of multigrade classes, such as the Alternative Learning System developed in the Philippines.

This study further highlights information gaps about the resources and cost (time, human resource, finance, materials, etc.) necessary to provide multigrade teaching in rural and remote classrooms. Some of the considerations are:

8. National standards to rationalise decisions about the location and size of schools to receive multigrade teaching support are needed to ensure effective distribution of finance and human resources.

**9.** Information about the current location of small and multigrade schools, their size, distance from each other and time from the nearest all-weather paved roads is needed for effective planning of resource allocation.

# 1. Introduction

## 1.1 Purpose

The purpose of this rapid appraisal of literature on multigrade teaching is to contribute to strategic thinking to improve the quality of education in schools across Lao PDR. The findings of the study are intended to inform:

a) Ministry of Education and Sports officials about options for achieving quality teaching in multigrade rural and remote schools.

b) Department of Foreign Affairs and Trade, in informing the current strategic direction of BEQUAL.

c) The implementation of Basic Education Quality and Access in Lao PDR (BEQUAL) program activities, in particular the implementation of activities under Key Result Area (KRA) 1: Policy, Planning and Coordination; KRA 3: Teacher Education and Support; and KRA 4: Primary Curriculum Development.

d) NGO partners working in the field of basic education in Lao PDR.

## 1.2 Scope of study

This rapid appraisal prioritised literature produced over the last decade from ASEAN and other regions of relevance to Lao PDR. The study builds on an earlier rapid appraisal by the LADLF, which reviewed the available literature and situation of multigrade teaching in Lao PDR (LADLF 2016b). It is not a comprehensive literature review of multigrade teaching as pedagogy, nor a review of policy on curriculum and teacher training.

Key questions for the rapid appraisal are:

- What is the current situation of small schools and multigrade teaching in Lao PDR?
- What are the lessons learned from ASEAN countries and internationally in the implementation of multigrade teaching that can inform policy in Lao PDR?
- What are the merits of different approaches used by ASEAN countries and internationally to manage access to quality education in remote and rural communities, with particular reference to small schools and multigrade teaching?

In this report, findings from the rapid appraisal are presented in the following order:

- Section 2 presents an overview of trends in the studies on multigrade classrooms and teaching;
- Section 3 outlines the findings from literature about multigrade teaching and classrooms in ASEAN and other regions;
- Section 4 provides an overview of the situation of multigrade teaching in Lao PDR; and
- Section 5 offers some concluding remarks about lessons for the Lao PDR context from countries in ASEAN and other regions.

## 1.3 Methodology

### 1.3.1 Data collection

The data was sourced using online academic journal databases and internet search engines and relevant key terms such as 'multigrade', 'small schools' and 'rural schools'. Regional basic education specialists in Indonesia, Timor Leste, Cambodia, Thailand and Australia were also contacted for additional documents and suggestions of innovative programs relevant to the review. A complete list of reference materials reviewed is provided in the bibliography (Annex 1).

### 1.3.2 Analysis

Literature on multigrade teaching in the region comprises mostly small-scale qualitative studies. Findings from the studies have been analysed and grouped into two broad themes. Emergent themes in studies were also identified for this appraisal (see Table 1).

**Table 1 - Analytical framework for the rapid appraisal of literature**

| Themes | Sub-themes |
|---|---|
| **Institutional response to multigrade classrooms and teaching in the country context** | • National education policy<br>• Policies relating to curriculum and teaching<br>• Institutional arrangements to support or address multigrade classrooms and teaching<br>• Education resource allocation for multigrade classrooms and teaching |
| **Good practice multigrade teaching**[1] | • Multigrade teaching as a teaching philosophy<br>• Effective classroom management<br>• Adapting curriculum and lesson plans<br>• Adapting teaching and learning materials<br>• Assessing learning and teaching outcomes |
| **Emergent theme: rural and remote disadvantage** | • Rural and remote context<br>• Supply of education services in rural and remote areas |

## 1.4 Limitations

This rapid appraisal aims to improve the understanding of a range of approaches to multigrade schooling and provision of quality education. It is not a systematic and comprehensive literature review and does not provide an assessment of the theoretical basis of multigrade teaching nor an examination of teaching techniques of relevance to the Lao PDR context. This would require a more significant research to ensure it can inform program initiatives.

[1] UNESCO's *Practical Tips for Teaching Multigrade Classes* (UNESCO 2015).

## 1.5 Definitions

**Multigrade classes,** also known as 'composite classes' in countries such as New Zealand and the Philippines (Wilkinson and Hamilton 2003; SEAMEO INNOTECH 2009), refer to classes in which two or more grade years are studying under the responsibility of a single teacher (Little 2006, 3). Teaching methods may range from teaching each grade separately in turn to a completely integrated class where two or more grades are taught together at the same time irrespective of grade levels. By contrast, in **monograde classes** teachers teach a single grade in a single classroom.[2]

**Multigrade teaching** is often used as a catchall term to describe both multigrade classes and a concept associated with a particular set of holistic teaching practices such as, flexible classroom management; child-centred teaching; teachers as learning facilitators instead of lecturers; and increased community participation in school management. To avoid any confusion, in this report a **multigrade class** refers to a classroom in which more than one grade level is taught, while **multigrade teaching** refers to a set of good teaching practices promoted by UNESCO as a means to improve learning outcomes in multigrade classrooms (UNESCO 2015).

The definition of **small, rural and remote schools** varies between countries. In Lao PDR, the National Assessment of Student Learning Outcomes (ASLO) III defines **rural schools** as schools with a main access road to the school, and **remote schools** as schools without a main access road to the school (Research Institute for Education Sciences 2014, 6).

There is no universally recognised definition of a 'small school'. In Thailand and China, schools with less than 100 students are considered small (Buaraphan, 2013, 130, UNESCO Appeal 2015, 32). In Lao PDR, 66 percent of schools have less than 100 students (Quinn 2017). Small schools often comprise of multigrade classrooms to cover the uneven student numbers across different grades, or a disproportionate student to teacher ratio. In this report, **small schools** refer loosely to schools with an incomplete grade (approximately less than 125 students), and **rural and remote schools** to schools located more than 30 minutes' walk from a national, provincial or district centre.

[2] Other teaching options include multi-age classes**,** where students of different ages are grouped together in the same classroom and at the same grade level according to their ability (Little 2001, 483) and multi-class teaching, where a teacher moves between different grades taught in different classrooms (Research Centre for Educational Innovation and Development 2004).

# 2. Overview of Literature

Studies on multigrade teaching flourished from the 1990s to early 2000s. These studies mainly focused on two themes: 1) the comparison of cost effectiveness of providing multigrade classrooms with the costs of closing monograde small schools in rural and remote areas (Little 2004, 19); and 2) student learning outcomes in multigrade and monograde classrooms.

Most of these studies focused on student learning outcomes in developed and OECD countries, with only a few studies conducted in developing countries, funded by institutional or bi-lateral donors (Little 2001).

Studies on the effects of multigrade teaching on learning outcomes in developing countries at the turn of the millennium were part of the emerging drive under the Millennium Development Goals (MDG) to achieve universal primary education. UNESCO, and to a lesser degree UNICEF, provided funding for studies and projects to support multigrade education as a means to achieve Education For All targets (SEAMEO INNOTECH 2012b, 5).

LADLF (2016b) conducted an appraisal of literature on multigrade teaching in Lao PDR from 2006 to 2016. The appraisal found ten publicly available reports relating to multigrade teaching. Two of these reports focused on multigrade teaching in Lao PDR and the remaining eight on teaching basic education or teacher training in the country.

Since the mid-2000s studies on multigrade education have waned. However, two notable exceptions are research projects conducted in the ASEAN region;

- In 2012, ASEAN Ministers of Education approved a regional study on multigrade teaching. Conducted by SEAMEO INNOTECH in seven ASEAN countries - Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste and Vietnam – the study resulted in a report on *Quality indicators of multigrade instruction in Southeast Asia*.

- In 2014, UNESCO Bangkok conducted a multi-country review of multigrade teaching in Bangladesh, Cambodia, China, Lao PDR, Nepal, Pakistan and Thailand. The research examined each country's current multigrade teaching policies and practices, policy options for improving the overall quality of multigrade teaching, and the findings contributed to an advocacy brief for multigrade teaching policy. The consolidated findings of this multi-country review *Promoting Quality Learning Through Enhanced Multigrade Teaching* have not been made public.[3]

[3] Details of the workshop can be found at http://www.unescobkk.org/news/article/promoting-quality-learning-through-enhanced-multigrade-teaching-in-the-asia-pacific-region/. Dissemination of the UNESCO report will require the agreement of UNESCO Bangkok, and the relevant country study authors. A report and presentation focusing on multigrade teaching in Lao PDR were produced within the framework of this regional research.

The concept of multigrade teaching is associated with a particular set of holistic teaching practices presented as principles of good multigrade teaching at the UNESCO's workshop on *Promoting Quality Learning through Enhanced Multigrade Teaching in the Asia Pacific Region* in 2014 (Shaeffer 2014). Good practice for effective multigrade teaching emphasises the importance of supportive elements or resources encapsulated in UNESCO's *Practical Tips for Teaching Multigrade Classes* (see Box 1). These good practice guidelines are discussed further in examples from ASEAN and other regions presented in section 3.

**Box 1 - Good practice for effective multigrade teaching (UNESCO 2015)**

1. Adapting to student diversity
2. Effective classroom management
3. Adapting curriculum and lesson plans
4. Adapting teaching and learning materials
5. Assessing learning and teaching outcomes
6. Effective methods for group teaching

# 3. Multigrade Teaching in ASEAN and Other Countries

## 3.1 Institutional responses to multigrade teaching

In most OECD and other developed countries, multigrade teaching is not only used as a measure to achieve universal access to basic education but it is also a pedagogical preference. In many ASEAN and other developing countries, as in Lao PDR, multigrade teaching is primarily viewed as a means to achieve universal primary education under the MDGs. Many governments have incorporated individual measures relating to multigrade teaching into curriculum and teaching policies. Multigrade teaching in this situation occurs as a default position to facilitate access to primary education in remote and rural areas where supply challenges are more pronounced. For example, when resources are insufficient to provide a teacher for each grade; student numbers exceed the number of teaching resources - teachers, classrooms - available (Pakistan and India); or student numbers fall in rural populations as a result of rural exodus (Thailand and China).

In other countries, multigrade teaching has been included as a sub-measure under a range of education policies to increase the quality of education in rural, remote or poor areas (Cambodia and Australia), or as part of inclusive education programs (Bangladesh).

To support policy objectives, governments often provide incentive structures such as teacher salary levels, loading, allowances and other benefits for teaching in multigrade classrooms. Salary incentives are often used in countries such as Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Thailand and Vietnam. In addition, multigrade instruction is also included in policies for school management, teacher training and learning materials (Malaysia, Myanmar, Philippines, Thailand and Vietnam). A summary of policy initiatives relevant to multigrade practices across seven ASEAN countries is provided in Appendix 2.

### 3.1.1 Multigrade teaching as a teaching philosophy or approach

According to UNESCO's good practice guidelines, effective multigrade teaching should be founded on the principle of recognising and valuing student diversity; belief in the teacher as a 'facilitator' rather than a 'lecturer'; and recognition of students' contribution to the learning of others in the classroom (UNESCO 2015). Teacher attitudes and beliefs about learning acquisition can impact on the adoption of multigrade teaching methods. An analysis of teacher attitudes across several countries found that transforming the learning philosophy of teachers and, by extension, the approach of education systems is one of the minimum conditions for ensuring the delivery of effective multigrade teaching. Little (2004, 14) concludes that:

> *Deep-seated cultures of teaching and learning pose the greatest obstacle to enduring reforms designed to meet the needs of the multigrade classroom... differentiation based on groups may be more acceptable in collectivist cultures than differentiation based on individuals.*

A New Zealand study found that teachers in both multigrade and monograde classrooms used a highly child-centred and developmental approach underpinned by the belief that students all have differing abilities in the classroom. Among the 17 teachers interviewed and observed in this study, 70 percent considered there was no difference between teaching in a multigrade or a monograde classroom because the teachers believed that they have to adapt the teaching technique to suit the students' abilities, irrespective of grade (Wilkinson and Hamilton 2003).

Other studies in the Asia region have highlighted that many teachers hold negative attitudes about multigrade teaching and do not believe it is a viable teaching approach in its own right. In the words of a teacher interviewed in China, "*if there is a day when each school in China begins to adopt multigrade, I'm afraid that the educational level of our country falls behind that of other countries. Actually, I think it's better to have a reform of the educational system than one practicing multigrade.*" (UNESCO Appeal 2015,106-107). A teacher educator in the same study dismissed multigrade teaching as "an NGO's public welfare activity" rather than a viable educational approach (UNESCO Appeal 2015,106-107). In Pakistan, the National Education Policy (2009) formalises the institutional response by declaring that multigrade teaching "*shall be eliminated by recruiting needs-based teachers and side by side providing training to in-service teachers on multigrade methodologies till removal of teachers' shortage in the system*." (UNESCO Appeal 2015, 172).

### 3.1.2 Adapting curriculum, lesson plans and teaching materials

Curriculum and lesson plans for monograde teaching can be adapted for multigrade teaching. Teachers can choose themes or learning competencies to teach across the grade levels together with appropriate materials; teach students together as one group for some subjects (such as social studies, art or physical education) and separately for others (language and mathematics); or use a combination of these approaches for different subjects.

In many ASEAN countries, including Lao PDR, teachers are expected to adapt the curriculum and lesson plans from monograde classrooms for multigrade teaching. A theme emerging from the international literature is that teachers attempting to follow monograde curricula, or attempting to adapt the national curriculum for their multigrade classrooms, found it difficult and time-consuming.

Some ASEAN countries acknowledge the additional work required by teachers and have put in place supportive education policies. Indonesia, Thailand and Vietnam have adopted national education policies that allow adjustments to the national curriculum to accommodate multigrade teaching (SEAMEO INNOTECH 2012b, 18). Examples include:

- In Indonesia, each school develops its own curriculum on the basis of national standards.
- In Thailand, the Office of the Basic Education Commission has also developed a separate national curriculum for multigrade teaching of different grade levels that appears to have been successfully adopted by teachers. Thailand's Office of the Basic Education Commission is an example of a national multigrade curriculum that can be delivered in multigrade classrooms with appropriate support for teachers (Buaraphan 2013).
- In Vietnam, multigrade schools can use a modified curriculum that emphasises language acquisition and mathematics (SEAMEO INNOTECH 2012b, 18, 53; Son Vu and Pridmore, 2006).

In Vietnam, a study found that multigrade teachers often work in very disadvantaged settings and adapting the curriculum materials greatly increased their workloads. The increased workloads associated with multigrade teaching led to a drop in teaching quality creating negative attitudes about multigrade teaching among teachers (Pridmore 2007, 560).

According to good practice for multigrade teaching, teaching and learning materials should be appropriate for student ability and allow for independent activity. The learning activities and materials should be adequate and diverse to hold student interest. The international literature in English offers very few examples of adapted learning and teaching materials for multigrade teaching. In the UNESCO regional multigrade study (2015), multigrade classrooms in five of the six countries in the study was found to have insufficient teaching and learning materials.[4] In the Philippines, the *Multigrade Program* offers two programs to support multigrade teachers: 1) the *Multigrade Teach-Learn Package* provides teachers with guidance and exercises for each lesson; and 2) the *E-IMPACT system* provides audio and video tapes for self-directed learning matched to the national curriculum for students supervised by a teacher, higher grade students or community members (SEAMEO INNOTECH 2012b, 21).

### 3.1.3 Effective classroom management

Effective classroom management for multigrade teaching requires adequate preparation of the classroom layout, lessons, classroom activities, scheduling of activities, and effective mechanisms for classroom discipline that facilitate independent learning. International studies highlight that the resources necessary for effective classroom management for multigrade teaching are often lacking in developing and middle income countries. Barriers to effective multigrade classroom management include small classroom sizes that do not allow areas for students to study independently, and large numbers of students in a single classroom that exacerbate disruption and prevent the concentration needed for independent learning. Researchers of multigrade teaching in Pakistan highlighted inappropriate classroom size as a factor impacting on teachers' ability to manage the classroom effectively (UNESCO Appeal 2015, 143). In Cambodia, the quality of the classroom environment was singled out as a barrier for teacher motivation to be deployed to multigrade schools (UNESCO Appeal 2015, 31, 66).

### 3.1.4 Organising students into groups

Teaching in groups is a fundamental skill for multigrade teaching. Students can be divided into groups according to age, grade, ability or background. Governments in Southeast Asian countries take different approaches organising student groupings for multigrade teaching. Examples include: organising students in groups based on their abilities within or across grades; grouping students into mixed-ability groups; and individual work is also organised for students in cases where it is appropriate. The Philippines has adopted a *Modified in School off School Approach*, whereby classes are organised into one week with a teacher and one week with set work supervised by community helpers in a separate location. This approach is used to

[4] References for individual countries can be found for Bangladesh, p.27; Cambodia, p.29; 112; Lao, p.143; Nepal, p.159; Thailand, p.265.

alleviate pressures on classroom space and requires effective community supervision (SEAMEO INNOTECH 2012b, 2012a). A summary of different grouping arrangements in multigrade classrooms is provided in Annex 3.

### 3.1.5 Assessing learning and teaching outcomes

Multigrade teaching places a greater emphasis on the progressive learning of students in line with their abilities. This requires teachers to prepare materials and assessments to suit the needs of students. Multigrade teachers are expected to spend more time than monograde teachers on different types of individual and group assessments that take into account independent learning (formative assessment).

Most ASEAN countries use uniform testing, such as national examination systems, irrespective of whether students are taught in monograde or multigrade classrooms. Uniform testing requires that students achieve a common body of knowledge at a defined point in time (summative assessment), in this way contradicts the multigrade approach to flexible assessment of student learning. The Philippines has attempted to provide some flexibility in student learning and assessments. The government adopted an *Alternative Learning System* that allows students to complete learning modules at their own pace, the modules were based on the same standards as the formal education system. Each level they complete is recognised as an equivalent to a level in the formal education system, allowing students to continue into formal education at a higher level (SEAMEO INNOTECH 2012a, 54).

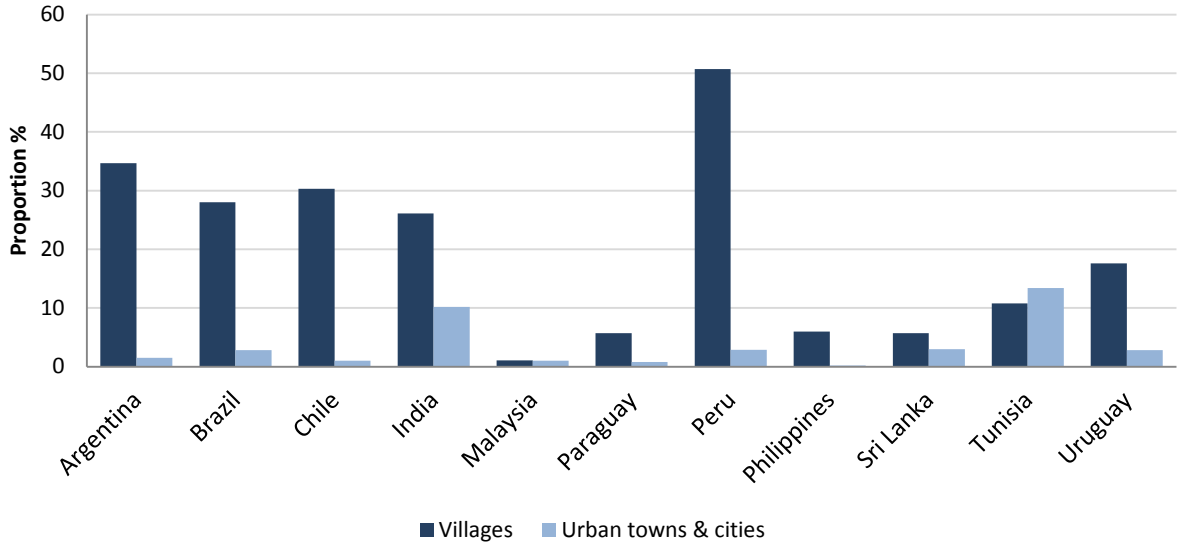
## 3.2 Context and prevalence of multigrade classrooms

Multigrade classrooms are common throughout the developed and developing world. Evidence is generally gathered through national studies, which use a variety of methods that prevent comparisons across countries and regions. A cross-country study covering 11 middle-income countries highlights the use of multigrade classrooms by governments as a means to pursue education access and/or quality policy objectives (UNESCO 2008).

Multigrade teaching is used as an effective way to enable access to primary education in rural and remote areas, especially where population density is low. In 2008-09, 35 percent of schools in the Philippines had multigrade classrooms, mostly located in the most distant and inaccessible locations (SEAMEO INNOTECH 2012b, 39). In Peru, 50 percent of rural students were studying in a multigrade classroom compared with only 3 percent in urban areas (Figure 1). In 2013, China officially reported 12,962 multigrade classrooms across 82,768 teaching locations (UNESCO Appeal 2015, 32). In the Bangladesh *Community Learning Centres* program, 2,380 centres were established over a five-year period, with each centre catering to a maximum of 30 students (UNESCO Appeal 2015, 24).

Some countries have instituted policies to lower prevalence of multigrade classrooms and teaching. In Malaysia, the government policy of minimising multigrade classrooms has reduced the proportion of students in rural and urban areas studying in multigrade classrooms to 1 percent (Figure 1). Multigrade classrooms are also not permitted for Grade 6 students in Malaysia (SEAMEO INNOTECH 2012b, 32).

**Figure 1 - Proportion of pupils in multigrade classrooms, by school location for selected middle-income countries (2008)**




Source: Author's representation of UNESCO Institute for Statistics 2008.

## 3.3 Multigrade teaching and learning outcomes

There is inconclusive evidence to assert that multigrade teaching leads to lower student learning outcomes than monograde teaching. Research about student learning outcomes conducted over several decades in the United States showed that there was no significant difference in learning outcomes between multigrade and monograde classrooms (Little 2001, 486-488). In fact, there is some evidence of multigrade teaching resulting in higher outcomes in terms of social skills, such as greater learning autonomy and improved interactions between students of different abilities and ages (Little 2001).

Another example of benefits from effective multigrade teaching is from the *Escuela Nueva* schools program in Colombia. These schools combined multigrade classrooms with multigrade teaching methodologies in socio-economically disadvantaged locations. The Ministry of Education tested Grade 3 and Grade 5 students, and found *Escuela Nueva students* performed better in Maths and Spanish in Grade 3, and better in Maths in Grade 5 than students from 'traditional' schools. Grade 5 students from *Escuela Nueva* schools and traditional schools had similar test results for Spanish language. Subsequent studies confirmed these results, even taking into account student, family, school and teacher characteristics (Little 2001, 487). *Escuela Nueva* schools were particularly successful because they adopted a holistic approach to education. Compared with traditional schools, *Escuela Nueva* schools benefitted from innovative pedagogical methodologies such as: group learning, activity centres in classrooms, an adjusted curriculum, textbooks and libraries. In addition to a greater focus on the social role of the school as an information centre for the community and promotion of student participation in school management and organisation (Forero-Pineda 2006, 270).

A study conducted in the Philippines found that multigrade students performed between 2 percent and 10.9 percent worse than their counterparts in regular schools across the subjects of Filipino, Science, Math, English, and Hekasi. The study also pointed out that multigrade schools in the Philippines are established to serve the most remote and disadvantaged villages in the country. In this way the lower learning results cannot solely be attributed to learning in a multigrade classroom setting (SEAMEO INNOTECH 2012b, 39).

A study of teaching practices in New Zealand also concluded that there were no significant differences in learning outcomes resulting teaching in multigrade or monograde classrooms. Rather, the study found that the critical variable affecting students learning is the teacher. The study concluded that classroom composition (i.e. multigrade or monograde) matters less than the nature and quality of instruction provided by the teacher in the classroom (Wilkinson and Hamilton 2003, 234).

In summary, findings from international studies about student learning outcomes and multigrade teaching are:

- There is limited evidence suggesting multigrade teaching methods negatively impacts on student learning outcomes.
- Discernible benefits for student learning from multigrade teaching is usually attributed to the quality of teaching instructions and appropriate resources to support learning.
- In one case (Philippines), where student learning outcomes were comparatively lower than in monograde teaching classrooms, the presence of rural and remote disadvantage seems a stronger influencing factor than the teaching method.

## 3.4 Managing access to quality education in rural and remote areas

The provision of quality education in rural and remote areas is a re-occurring concern in many international studies. The *Programme for International Student Assessment* (PISA) is the largest international comparative study of student results. In 2013, the PISA analysis of student learning outcomes in reading and mathematics across 72 countries found that, students in rural settings were up to a year behind those in urban areas (OECD 2013c, 1). This was true in both OECD and developing countries, but the difference in learning outcomes was larger in developing countries. In Thailand, an analysis of PISA outcomes was even more startling. In 2003, 40 percent of 15- year old students in rural areas were found to be at least 3 academic years behind their urban counterparts. By 2012, the gap had widened even more, with more than 47 percent of rural students more than 3 years behind urban students (World Bank 2015, 8). Results from Australia's *National Assessment Program in Literacy and Numeracy* (NAPLAN) found that by Grade 3, students in rural Australia were on average already 7 months behind those living in urban areas, and the gap had reached ten months by Grade 5 (Lamb et al. 2014, 66).

An emerging theme from a review of international studies is the influence of the rural and remote context (in developed and developing countries) which seems to contribute to lower learning outcomes in the following ways:

- Socio-economic factors among rural and remote families, such as poverty and cultural norms, influence values placed on education and participation in schooling.

- Factors pertaining to the supply of education in rural and remote locations include small-size schools; limited variety of programs; deployment of qualified and highly experienced teachers and principals; lack of autonomy by schools in allocating their limited resources; and inadequate national policies and standards to respond to the higher per student cost of providing teaching resources to rural and remote areas (Lamb et al. 2014; World Bank 2015; Du 2016, Chapter 6).
- Urban schools are situated closer to education financial and human resources which facilitates access to better quality teaching and resources (OECD 2013c).

## 3.5 Options for providing quality schooling in rural and remote areas

International studies demonstrate that multigrade teaching is only one option for ensuring access to education in sparsely populated areas. To be effective, multigrade teaching requires specific teaching resources and better skilled teachers than for monograde teaching, which are less likely to be available in rural and remote areas where multigrade classes in Lao PDR are more prevalent.

An evaluation of the World Bank's *Primary Education Initiatives* across 80 projects, primarily in developing countries, found that ensuring quality outcomes in remote and disadvantaged areas will necessarily involve higher costs than in urban areas. It recommended factoring this geographical disadvantage when planning for education financing (World Bank 2006).

Different countries have developed, piloted or implemented alternative approaches to multigrade teaching in classrooms to deliver quality education in rural and remote areas. Examples of alternatives include: school consolidation, boarding schools, increased access to transport, staggered enrolment, double shift teaching, remote teaching and IT solutions, increased community engagement, sharing administrative resources across schools and cluster schools. To address the issue, Thailand introduced a series of innovative measures to overcome the limitations and costs of achieving quality learning outcomes in small, rural and remote schools (see Box 2). Other alternative approaches are described in further detail in Annex 4.

**Box 2 - Implementing an integrated method to raise quality in small schools in Thailand**

(Buaraphan 2013)

The Office of Basic Education Commission has adopted 4 measures to increase quality in small schools:

1) Multigrade teaching - with the national provision of appropriate materials for mixed-grade students.
2) Computer teaching - with a car equipped with computers serving small schools, or establishment of a 'station unit' in a larger school where students can visit the computer room periodically.
3) Distance learning - by satellite with support of teachers to supplement learning.
4) Education networks - groups consisting of volunteer teachers, parents, and academic networks that volunteer to support and supplement teachers in small schools.

# 4. Multigrade Teaching in Lao PDR

This section provides an overview of the context and implementation of multigrade classrooms and teaching in Lao PDR. Findings here present the institutional responses to multigrade classrooms and teaching, followed by a discussion of the prevalence of multigrade classrooms and learning outcomes from multigrade teaching. Multigrade teaching in Lao PDR is also discussed in relation to good practice principles.

## 4.1 Institutional responses to multigrade teaching

### 4.1.1 Policy approach to multigrade classrooms and teaching

In Lao PDR, multigrade teaching has emerged as a means of fulfilling the rights of all Lao citizens to receive education and enable them to attend compulsory primary education as required under the *Lao PDR Constitution* (2003, Articles 22, 38, 61) and the *Law on Education* (2015, Article 28). In support of these requirements, several subordinate documents regulate the implementation of compulsory education and multigrade teaching. A special salary incentive was introduced to provide for teachers who teach two grades (25 percent on top of base salary) or three grades (50 percent on top of base salary). The *Decree on Teachers* (2012) specifies that in-service training modules should include multigrade teaching. This component of teacher training is limited to three days of trainings. Unlike in some ASEAN countries, multigrade instruction is not described in education policies on providing support to schools, teacher training and curriculum materials. As such multigrade teaching in Lao PDR is not defined as an approach or philosophy and it is minimally regulated under the *Decree on Teachers* (177/ 2012). Box 3 lists the key legislative and policy documents relevant to multigrade teaching in Lao PDR.

**Box 3 – Key legislation and policy relevant to multigrade teaching in Lao PDR.**

- PM Decree No. 138/PM/1996 on Compulsory Education that introduced compulsory primary schooling for all Lao citizens from age 6.
- Ministerial Directive No. 181/MOE.PPE/10 supporting multigrade teaching as an efficient method to ensure access for rural remote areas; upgrading of incomplete schools to 5 years of primary schooling.
- PM Decree No.110/PM, 8/6/2001 allocates allowances to multigrade teachers.
- Decree on Teachers (2012).
- Ministerial Guidelines No. 0047/MOES/2014. Guideline on the Development of the Annual Plan on Employment and Use of Teachers.

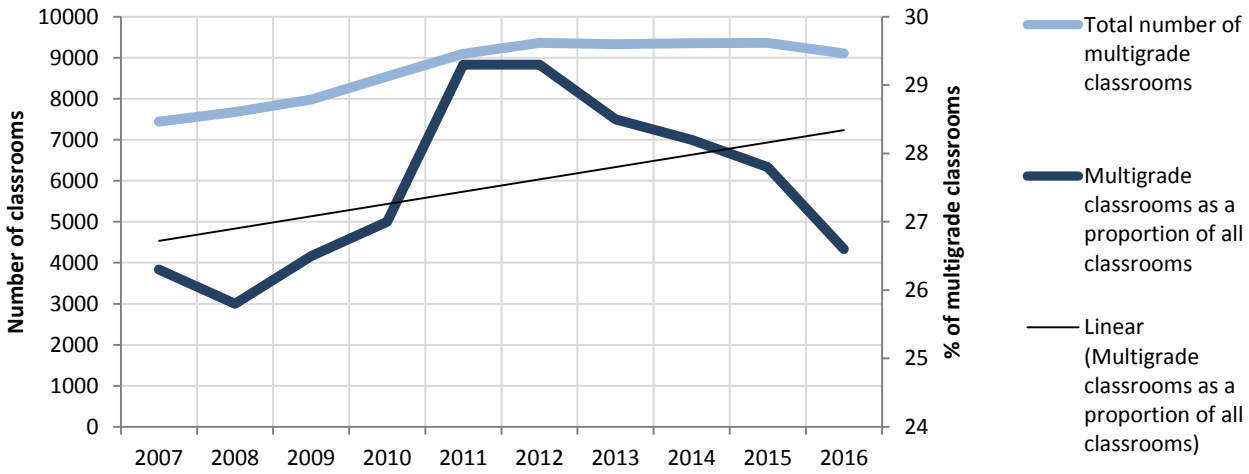
In Lao PDR, multigrade classrooms are mostly found in rural and remote areas. The official stance of the GoL is that multigrade classrooms are a mechanism to deliver cost-efficient basic education across a sparsely populated country. This contrasts with findings from international studies that demonstrate the use of multigrade teaching and classrooms as a strategy to improve access and quality of education.

## 4.2 Prevalence of multigrade classrooms

### 4.2.1 Multigrade classrooms has increased access to primary education

Multigrade classrooms have become a common feature in schools across Lao PDR. In 2010, the Ministry of Education and Sports instructed, under Directive No. 181/MOE.PPE/10, provincial education authorities to upgrade incomplete primary schools (offering only 3 grades of primary schooling) to 5 grades of primary schooling (UNESCO and Ministry of Education and Sports 2014, 12). This directive along with the national policy to increase access to primary education has led to an increase in classrooms and multigrade classrooms. In 2016, there were an estimated 9,000 multigrade classrooms in 8,864 primary schools. The proportion of multigrade classrooms has steadily increased because of government policy over the past decade (Figure 2).

**Figure 2 - Distribution of multigrade classrooms in Lao PDR from 2007 to 2016**




Source: EduInfo, Statistics and Information Technology Center of Education and Sports (SITCES), Lao PDR. www.devinfo.org/laoeduinfo/. Accessed May 2017.

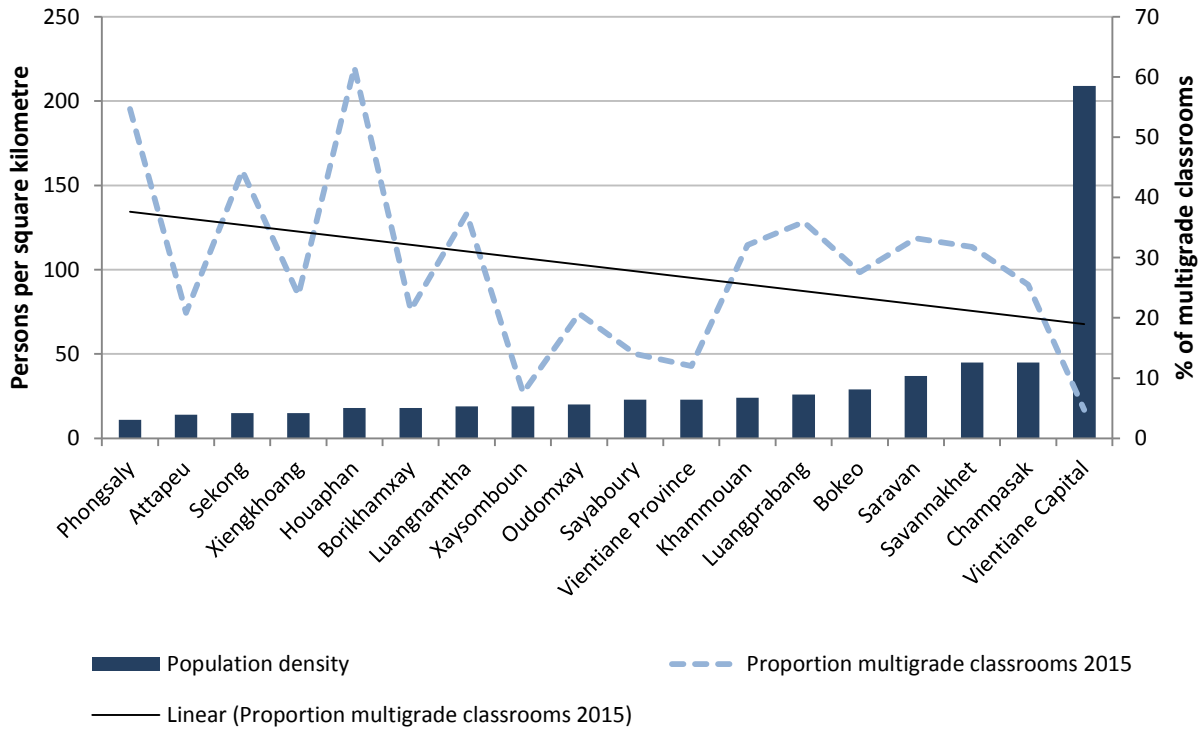
This upward trend can be viewed in terms of MoES achieving one of its core functions and confirms the policy approach to multigrade classroom and teaching as:

> *an effective strategy to be used in the Lao context for providing a complete primary cycle…to make efficient use of existing education resources… (UNESCO and Ministry of Education and Sports 2014, 9).*

### 4.2.2 Multigrade classrooms occur more frequently in rural and remote areas

The geographical distribution of multigrade classrooms varies greatly between provinces. Ranging from Houaphan province with the highest proportion of multigrade classrooms at 62 percent, to Vientiane Capital with 4.7 percent of all classrooms being multigrade (Figure 3).

**Figure 3 - Distribution of multigrade classrooms by population density and province, Lao PDR (2015)**




Source: EduInfo, Statistics and Information Technology Center of Education and Sports (SITCES), Lao PDR. http://www.devinfo.org/laoeduinfo/. Accessed May 2017. Author's representation.

The proportion of multigrade classrooms appears to be associated with population density in the provinces. Vientiane Capital has the country's lowest proportion of multigrade classrooms and highest population density of 209 persons per square kilometre; Houaphan has the country's highest proportion of multigrade classroom and is among the least densely populated provinces (Figure 3). Multigrade classrooms are more likely to appear in provinces with lower population density as a result from the MoES policy "to meet the needs of unreached and the marginalised children living in rural, remote, mountainous and less populated areas" (UNESCO and Ministry of Education and Sports 2014, 9).

## 4.3 Multigrade classrooms and teaching

### 4.3.1 Adapting curriculum, lesson plans, teaching and learning materials

For effective multigrade teaching, teaching and learning materials should be appropriate for different levels of abilities and allow for independent activities. Studies in Lao PDR found that teachers may combine classes in art, singing or physical education, but otherwise teachers do not adapt their teaching materials and lessons for multigrade teaching (Howe and Holt 2012). One explanation for this is that teacher training on multigrade teaching is inadequate and insufficiently resourced. Under the Laos-Australia Basic Education Project (LABEP 1999-2007), ethnic student teachers where trained in multigrade teaching, using an effective mix of theory and practicum. LABEP also trained Pedagogical Advisors to provide regular support to multigrade teachers after they were posted in remote and rural areas. A post-project follow up found the training remained effective five years after LABEP. Evidence of this is that 87% of ethnic teachers

recruited by the project continued to use the skills they learned in training (LADLF, 2016b). The example highlights that with dedicated teacher support and resource commitment, multigrade teaching in Lao PDR can be effective.

In Lao PDR, teachers are currently expected to develop their own teaching materials based on the Ministry of Education and Sports (MoES) guidelines in the Teacher Handbooks. The Handbooks do not provide specific instructions for adapting learning and teaching materials for a multigrade teaching.

### 4.3.2 Effective classroom management and organising students into groups

Research on multigrade teaching in Lao PDR highlighted inadequate classroom size as a factor impacting on teachers' ability to manage the classroom effectively (UNESCO Appeal 2015, 143). Insufficient classrooms and tables were identified as a major hindrance to promoting student-centred teaching in the classroom (Teacher Development Centre 2010). Inappropriate classroom layout contributes to high levels of disturbance between grades (Howe and Holt 2012, 32-33).

Where teachers provide poor instructions and/or where lessons are not interactive and the classroom is disruptive, teaching multigrades in this classroom environment affects the ability of students to learn. Where classroom management is already poor in monograde classrooms, studies in Lao PDR demonstrate that multigrade classroom management negatively impacts on learning by reducing lesson time, increases passive learning and disruptive behaviour (Howe and Holt 2012 cited in LADLF, 2016b).

Teaching in groups is a fundamental skill for effective multigrade teaching. Students can be divided into groups according to age, grade, ability or background. Studies on multigrade classroom teaching in Lao PDR found that the most common practice is to organise students by grade levels in a classroom and for the teacher to rotate between the two (or more) grades. One grade level is taught, and the other students are given a 'holding' activity while the teacher is teaching another group of students (Palme and Hojlund 2013; Howe and Holt 2012, 4, 28). This way of organising students means children often receive insufficient instructions, few interactive learning activities and reduced learning time as they wait for the teacher. The current teaching practice in multigrade classrooms as described in these studies meet the minimum definition of multigrade classes - where more than one grade is being taught by one teacher. As such, multigrade teaching defined as a distinct pedagogy or philosophy is not supported in policy or practice in schools with multigrade classes.

### 4.3.3 Assessing learning and teaching outcomes

Learning outcomes for multigrade and monograde classrooms have not been widely investigated in Lao PDR (LADLF, 2016b). Teachers use a combination of formative and summative student assessments.[5]

[5] Formative assessment is aimed at monitoring student learning to provide teachers with information about how the student is learning the content. This provides an opportunity for the teacher to improve their techniques and to target student learning weaknesses and strengths. For example, students may be asked to write a couple of sentences about a topic or draw a diagram to show what they have learnt. Summative assessment is aimed at evaluating the student's learning at the end of a unit and to compare the learning to a standard or benchmark. For example, semester or final exams.

Rather, student learning outcomes are largely assessed along a linear progression through the formal lesson framework set by the national curriculum for each grade (LADLF 2016).[6] The student assessment system that has been and still is in place includes teachers assessing pupils each month in each subject, semester and yearly exams at school level and a final end of schooling exam co-ordinated by DESB (Palme and Hojlund 2013, 25). Selected students who have high academic achievements in their schools also participate in a national exam competition at the end of Grade 5. This reliance on a formalised set of learning outcomes and linear assessment of learning may not appropriately support teaching and learning in multigrade classrooms.

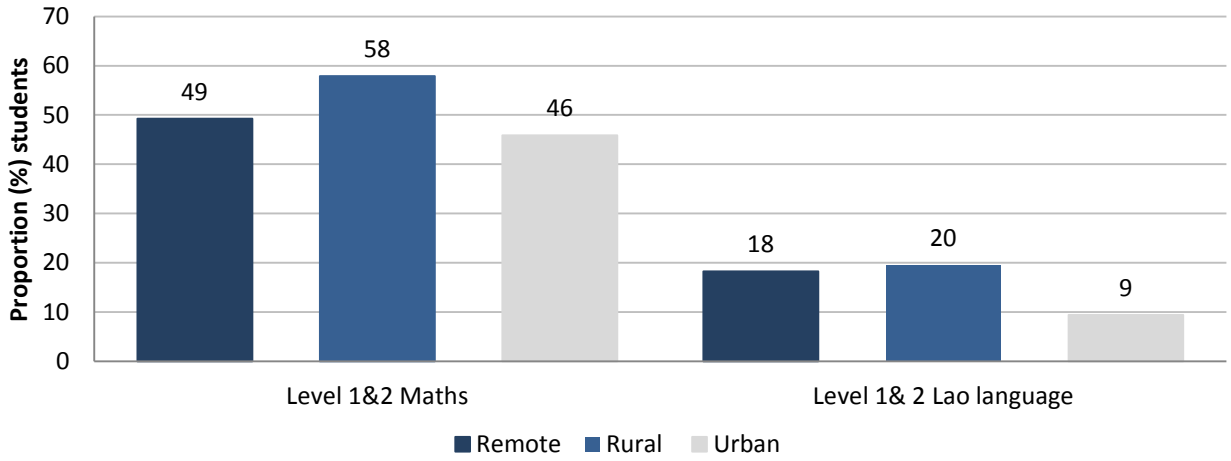
Many teachers in Lao PDR perceive multigrade teaching as substandard quality education and regard it mostly as "a practical and low cost pedagogy to promote accelerating the achievement of universal quality education for all" in rural and sparsely populated areas (UNESCO and Ministry of Education and Sports 2014, 9 and 22). Currently no reliable evidence is available on learning outcomes in multigrade classrooms to substantiate this perception. The perception that student learning outcomes in both literacy and numeracy are significantly lower in multigrade classrooms, is prevalent among teachers and parents in rural and remote area (National Assessment of Student Learning Outcomes (ASLO III), Ministry of Education and Sports, 2013). The perception runs deep with many teachers and parents attributing poor learning to multigrade classrooms and teaching.

### 4.3.4 Student learning outcomes by geographical locations

Rural and remote areas generally have a greater ethnic diversity of non-Lao speaking students for whom Lao language acquisition is part of the classroom learning (LADLF 2016b). Poor Lao language proficiency negatively impacts on ethnic student learning outcomes in rural and remote areas. The ASLO (III) results show that more rural and remote students are represented in lower levels of function in maths and Lao language (Figure 4). For example, of all rural students assessed for maths, 58 per cent demonstrated 'pre-functional' numeracy and of all remote students assessed 49 percent also performed at the pre-functional level for maths. By comparison, urban students assessed performed slightly better with 46 percent demonstrating pre-functional numeracy skills. Rural and remote students seem to fair worse in Lao language. The results by geographical location suggest that rural and remote students performing at the pre-literacy level are proportionally over represented compared with urban students. For example, 9 percent of urban students assessed for Lao language performed at the pre-functional level compared with 20 percent of rural and 18 percent of remote students.

[6] Linear progression in this situation refers to student learning of units or modules in sequential order and assessments are used to track progression through each unit or module of learning.

**Figure 4 - Proportion of rural and remote students with pre-functional literacy and numeracy, Lao PDR (2013)**




Source: Author's chart based on ASLO (III) data.

The ASLO results presented here for Maths and Lao language highlights a geographical learning disadvantage among rural and remote students, rather than the fact that multigrade teaching has a negative impact on student learning. The education policy clearly intends to increase access to primary schooling through the provision of multigrade classrooms among other measures. Institutional support and resources has not endeavoured to achieve multigrade teaching in form or substance. Unless rural and remote disadvantage is accounted for and multigrade teaching becomes a formal objective in policy or program strategy, learning outcomes is unlikely to change.

# 5. Lessons for Multigrade Teaching in Lao PDR

Several key lessons to strengthen relevant policies, curriculum and teacher training in Lao PDR can be gauged from this rapid appraisal. These include the following:

1. Address existing teacher beliefs and inherent policy prejudices about student learning in a multigrade classroom and teaching methods to reduce resistance to any change program.

2. Consider a national multigrade curriculum and lesson plans to assist teachers with their teaching responsibilities in the classroom, such as the framework developed by the Office of the Basic Education Commission of Thailand.

3. Learn from the flexible strategies for multigrade teaching in remote and ethnic areas developed in the modified national curriculum focusing on language acquisition and maths for multigrade classrooms in Vietnam.

4. Incorporate specific features of multigrade teaching into resource planning - such as teacher allocation, lesson structures and planning, infrastructure and school planning - in addition to pre- and in-service teacher training in multigrade teaching pedagogy, and along with multigrade teaching resources for teaching Lao language and maths.

5. Prioritise adequate resourcing of learning materials for multigrade classes, recognising that provision of these materials to rural and remote areas is likely to be more costly than urban areas.

6. Explore forms of student grouping for multigrade teaching practiced in other Asian countries, including organising students per groups based on their abilities within or across grades or grouping students into mixed-ability groups.

7. Develop and support the implementation of a flexible assessment framework that caters specifically to the needs of multigrade classes, such as the Alternative Learning System developed in the Philippines.

In addition, considerations around information gaps about the resources and cost (time, human resource, finance, materials, etc.) necessary to provide multigrade teaching in Laos DR, include:

8. National standards to rationalise decisions about the location and size of schools to receive multigrade teaching support are needed to ensure effective distribution of finance and human resources.

**9.** Information about the current location of small and multigrade schools - their size, distance from each other and time from the nearest all-weather paved roads - is needed for effective planning of resource allocation.

# Annexes

# Annexes

**Annex 1: Bibliography**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**Annex 2: Policy initiatives with implications for multigrade classes in selected ASEAN countries**

| Country | Policy Support for Multigrade Classes |
|---|---|
| **Cambodia** | Policies supplement subsistence allowances for multigrade teachers to:<br>• Add 60 percent of the multigrade teacher's salary to his/her existing salary if he/she teaches two-grade classes<br>• Add 80 percent of the multigrade teacher's salary to his/her existing salary if he/she teachers three-grade classes<br>• Add 160 percent of the multigrade teacher's salary to his/her existing salary if he/she teaches double-shift classes for two-grade levels<br>• Add 180 percent of the multigrade teacher's salary to his/her existing salary if he/she teaches double-shift classes for three-grade levels |
| **Indonesia** | • A ministry decree to develop small-island, border, and remote schools was passed.<br>• Multigrade teachers are covered in policies on teacher incentives, improvement, certification, awards and protection, as well as materials support.<br>• Multigrade students are also included when granting scholarships or grants. |

**Annex 3: Organisational forms of multigrade classes in Southeast Asia**

| Country | Organizational Form |
|---|---|
| **Cambodia** | • For learning activities in the classroom, pupils are organized based on their abilities.<br>• Mixed-ability groups of students with approximate levels also exist. For instance, grade 2 is combined with grade 3; grade 4 is combined with grade 5; or grades 2, 3, and 4 are combined. |
| **Indonesia** | • Pupils are organized in mixed-ability groups. For instance, grade 4 is mixed with grade 6.<br>• Classes have students from different grade levels. |
| **Malaysia** | • Pupils are grouped into same- or mixed-ability groups or individually work, depending on the subject. They are separated by ability for subjects such as math, Malay, and English and mixed for other subjects. Students from years 1 to 3 are combined in level 1 and from years 4 to 6 in level 2.<br>• Each subject per level has a fixed number of periods. The timetable is the same as that used for mono-grade classes to make it easier for administrators to allocate periods for teachers. |

## Annex 4: Options for provision of quality education in rural areas: advantages and weaknesses

| Name | Example | Advantages | Weaknesses (what is needed for it to be successful) |
|---|---|---|---|
| **1. School consolidation** | Involves closure of schools and redistribution of students to larger schools. Thailand and China began to close schools following falling enrolments in rural areas.<br><br>Thailand – Policy of school closure for schools of less than 120 students (Buaraphan 2013)<br><br>China – School Mapping Restructure to allocate resources to larger schools (Zhao and Parolin 2012) | - Reduces costs of public education for the government.<br><br>- Frees resources to support teacher training, learning materials, and upgrading infrastructure more cost-effectively.<br><br>- Teacher deployment and support more easily managed.<br><br>- Schools able to provide larger range of subjects with qualified teachers. | - Students and families must bear the burden of additional transport, accommodation and living expenses<br><br>- Poor families bear an additional opportunity cost from the lost contribution of children to the family's income<br><br>-Primary students are unlikely to be able to travel far, or in safety, without an impact on the quality of their learning<br><br>- School closure can undermine community cohesion and the sustainable existence of the community<br><br>- Longer distances to travel may cause families to decide not to send their children to school. [7] |
| **2. Boarding schools** | Australia – Weekly or term boarding (Stokes et al. 1999)<br><br>China - Expanded as part of School Mapping Restructure (Zhao and Parolin 2012) | - Students able to attend larger schools in more urban environments with a variety of advantages. | - Safety and security of young children and girls can be especially problematic in boarding schools<br><br>- Boarding costs can place additional burdens on families<br><br>- Student subsidies and scholarships can off-set the cost of boarding and transport on families<br><br>- Not generally suitable for young children |
| **3. Transport** | Worldwide – public or privately funded school bus and transport systems provide cost-effective transport to nearby schools | - Students able to travel longer distances without family supervision | - Requires all-year accessible roads for transport<br><br>- Cost of a vehicle, driver, petrol and on-going maintenance can still be beyond the resources of poor families<br><br>- Government subsidies can offset the costs of transport in areas where |

[7] In Chad, student attendance dropped progressively once the school was more than 1 km from the student's home (Mulkeen and Chen 2008).

| | | | |
|---|---|---|---|
| | | | transport is a viable option. |
| **4. Staggered enrolment** | Schools enrol students in Grade 1 in every alternate year (Little 2001, 493) | - Small schools get larger enrolments for each grade<br>- Schools do not need to teach and manage all grades in any one year | - Half of all students must wait an additional year before commencing school<br>- Not all students may be able to start by the compulsory starting age<br>- Students will have greater age ranges and abilities within a single grade in any one year which the teacher must manage in the classroom |
| **5. Double shift teaching** | Different grades are taught in the morning and afternoon.<br>Cambodia (UNESCO Appeal 2015, 56-71)<br>Mozambique & Tanzania (Mulkeen and Chen 2008) | - Makes full use of existing classrooms<br>- Reduces the need for multigrade grades in a single, small classroom | - Can place additional burden on teachers<br>- Requires sufficient incentives to compensate for teacher time<br>- May reduce the total number of hours each grade spends learning |
| **6. Remote teaching and IT solutions** | US and Philippines - Virtual classrooms and Audio-visual projections (Johnson et al. 2014) (SEAMEO INNOTECH 2012a, 50)<br>Australia – School of the Air (Stokes et al. 1999)<br>Thailand - 'SchoolNet' resource platform for teachers (Rattanakhamfu 2016); mobile computer laboratories (Buaraphan 2013) | - Can bring the best teachers into a classroom in any location<br>- Can increase the range of subjects and subject specialists available to students<br>- Can improve information flow with teachers and reduce the isolation of teachers in remote areas<br>- Can reach students who cannot reach the nearest school | - Can be costly to set up and maintain infrastructure, especially in rural and remote areas<br>- Rural areas have lowest take-up of newest technologies and often the lowest access to technology infrastructure<br>- Educators may require specialised training<br>- Can require high levels of motivation and independent ability to study<br>- Requires development of specialised content to support the curriculum<br>- Requires electricity |
| **7. Increased community engagement** | Community assists in the teaching of certain subjects<br>Philippines – E-Impact learning modules (SEAMEO INNOTECH 2012b, 42)<br>Thailand – Handicraft and agriculture lessons | - In the Philippines, community support expands the available cohort of teachers in disadvantaged areas<br>- Increases community engagement and interest in the school<br>- Provides students with | - Requires organisation and interest of community<br>- May require support for materials, training of community assistants, suitable community facilities |

| | | | |
|---|---|---|---|
| | (UNESCO Appeal 2015)<br><br>Bangladesh – Community Learning Centres where teachers are community members (UNESCO Appeal 2015, 23-27) | practical lessons from knowledgeable implementers<br><br>- Widens the scope and understanding of learning to outside the classroom | |
| **8. Sharing administrative resources across schools; and cluster schools** | Scarce teaching or administrative resources shared between schools of a specific location.<br><br>Thailand (Buaraphan 2013, 134) | - Cost-effective way of sharing specialised resources across small schools<br><br>- Reduces administrative burden of teaching staff in small schools<br><br>- Sharing special education, curriculum development, technical services | - Cluster schools can result in higher dropout rates when the child must change school<br><br>- Needs support of local education offices<br><br>- Involves other costs such as transport and accommodation |

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