The Lao People's Democratic Republic

DATA MUST SPEAK

What can we learn about the practices and behaviours of highly effective schools?

data MUST SPEAK

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Acknowledgements

Data Must Speak research coalition of donors:

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Executive summary

Although the Lao People's Democratic Republic (Lao PDR) has made steady progress in expanding access to education in recent decades, many children still leave primary education unable to read, write or do simple numerical calculations.

National assessments show that student learning is below the desired levels in grades 3 and 9 (Ministry of Education and Sports [MoES], Lao PDR 2018) and regional data suggests that the learning outcomes of Lao PDR are lower than in other countries, with 50 per cent of Lao grade 5 students scoring in the lowest achievement band (United Nations Children's Fund and Southeast Asian Ministers of Education Organization 2020).

Despite this learning crisis, some schools are outperforming others operating in similar contexts and with similar resources to them, even in the most disadvantaged areas. The Data Must Speak positive deviance research aims to identify these 'positive deviant' or 'highly effective' primary schools in Lao PDR and the practices and behaviours underlying their success. The research adopts a mixed-methods approach, leveraging both quantitative and qualitative data collection, and incorporates a strong participatory approach through co-creation with relevant education stakeholders, especially the MoES.

This report presents important insights from both quantitative and qualitative data on local solutions used by a variety of education actors in positive deviant schools. It also shares broader evidence emerging from all schools on various education-related challenges.

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Characteristics of highly effective schools

Highly effective schools appear more focused on learning for all students and use various pedagogical strategies more frequently, including continuing to teach until all students understand, checking students' classwork and homework and more closely monitoring low performing students' learning progress. These practices are an integral part of formative assessment and related remedial action, which aims to improve both teaching and learning.

Teacher capacity – defined by teachers' content knowledge and pedagogical skills – is a strong predictor of student performance in Lao primary schools. Teachers in highly effective schools scored higher on a Lao language and mathematics assessment than teachers in other schools. Nevertheless, teachers' content knowledge remains low across all schools.

School principals in highly effective schools promote collaboration, provide support to teachers and engage parents as partners in improving student learning. They also build trust and respect between their schools and communities. However, many school principals report needing further training in teaching and learning management to promote students' academic achievements, implement the new curriculum and make effective use of school block grants (SBG).

Highly effective schools are twice as likely to have a female principal as other schools, highlighting the potential of female school leadership for improving student learning. However, only 27 per cent of principals in Lao PDR are female (MoES, Lao PDR 2023), signalling a need to generate more evidence of the barriers women may face in advancing to leadership roles.

Additional findings from all types of schools

Although students, teachers and school principals report a positive school climate in many respects, students also mention instances of bullying and violence between students and conflict with teachers, including physical punishment. School climate problems are more prevalent in larger and/or urban schools, and boys are more likely than girls to be involved in instances of violence.

Principals and teachers identified several challenges related to implementation of the new primary school curriculum, such as limited training time and heavy workloads when adapting new lesson plans. School closures caused by the COVID-19 pandemic have exacerbated these challenges by reducing the time available to complete the curriculum.

Teachers and school principals are generally positive about the school management and support systems, including support from District Education and Sports Bureaux, pedagogical advisors and Village Education Development Committees (VEDCs). However, this finding raises concerns about the contrast between the generally positive views of teachers and school principals and actual performance in the education system, especially based on measures of student and teacher achievement.

While the delivery process for SBGs has been streamlined in past years, there is still room for improving their implementation. On average, schools reported spending about 56 per cent of the total SBG on priority spending areas focused on teaching and learning, which is below the required 60 per cent minimum. School principals commonly referenced several areas for improving the SBG programme, including increasing the amount of SBGs, reducing delays in their delivery, providing SBGs in one transfer only and expanding the allowable categories for SBG spending.

While most schools offered remote learning during COVID-19 school closures, they struggled to engage all students and keep up with the curriculum. These challenges are partly due to the technology constraints in many communities and the difficulty of completing the curriculum when face-to-face teaching time is reduced.

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Policy recommendations

Invest in teacher capacity with a holistic and strategic approach

- Support teachers to improve their content mastery in Lao language and mathematics

- Establish effective pedagogical support systems for education professionals

- Ensure sustainable, strategic and equitable investments in the quality of primary school teachers

Strengthen school leadership and management practices

- Develop school principals' capacity as educational leaders and ensure time for instructional leadership activities within school principals' core tasks

- Improve gender equity in school leadership, including generating more evidence on the barriers women face in advancing to school leadership roles

Shift schools towards learning environments that focus on all students' learning

- Institutionalize formative assessment in teaching and learning practices, including through equipping school principals and teachers with the necessary skills and tools

Build conducive school climate that is inclusive and safe for all children

- Continue monitoring student well-being through large-scale assessments and other research frameworks

- Consider measures that may improve school climate such as positive discipline and social emotional learning

Improve SBG implementation

- Ensure adequate SBG documentation and its effective use

- Consider revisiting some allowable spending categories for SBG spending

Strengthen mitigation measures and the resilience of the education system in light of the COVID-19 pandemic and future external shocks

- Expand access to digital learning and improve ICT infrastructure, especially in rural areas

Establish a school improvement support system that engages multiple education stakeholders

- Continue making resource allocations to schools more needs-based using the Fundamental Quality Standards for primary schools being implemented in Lao PDR

- Strengthen the roles of VEDCs in school management practices

Leverage insights from the DMS research to improve learning in Lao PDR

- Use participatory research methods to identify levers for optimally scaling up practices and behaviours from highly effective schools to more schools

1. Introduction

Introduction

As the Lao People's Democratic Republic (Lao PDR) continues to see improvements in primary and lower secondary access, its education system is putting more emphasis on improving student learning outcomes as highlighted in the country's Education and Sports Sector Development Plan (ESSDP) 2021–2025. However, national assessments show that student learning is below desired levels in grades 3 and 9 (Ministry of Education and Sports [MoES], Lao PDR 2018).

The 2019 Southeast Asia Primary Learning Metrics (SEA-PLM) regional assessment also shows low learning outcomes, with 50 per cent of Lao grade 5 students scoring in the lowest achievement band, which was substantially higher than other country averages (United Nations Children's Fund and Southeast Asian Ministers of Education Organization 2020). Education financing needed to achieve improvements in education quality has also been insufficient. Although the ESSDP and 2015 Education Law indicate an annual target of 18 per cent of national budget allocated to education, actual allocations for education have fallen short of this target.

In 2022, just 12 per cent of the national budget was allocated towards education, declining from 16 per cent in 2016 (World Bank 2023).

There also remains an imbalance between wage and non-wage financing, with only around 8 per cent of the sub-national level education sector budget being allocated to non-wage expenditures such as teacher professional development and pedagogical support activities (MoES, Lao PDR 2020).

Despite these challenges, there are exceptional schools that are outperforming other schools in similar contexts and conditions, even in the most disadvantaged areas of Lao PDR. By identifying these 'positive deviant' or effective schools and the underlying practices and behaviours contributing to their success, important lessons can be drawn to support the scaling up of these practices and improving student learning across the country.

This report summarizes the main findings of the Data Must Speak (DMS) positive deviance research, a mixed-methods study on effective schools conducted by the Department of Education Quality Assurance (DEQA) of the MoES, in partnership with UNICEF Lao PDR and the DMS research team from UNICEF Innocenti – Global Office of Research and Foresight. After identifying positive deviant and comparison schools, quantitative and qualitative data were collected and detailed summaries of the main findings were developed. This report brings together the main findings from these analyses and presents key policy recommendations that can inform national decision-making and provide guidance for other countries participating in the DMS multi-country research.

The DMS research in Lao PDR has three main objectives:

Objective 1

To develop a profile of highly effective primary school characteristics that are validated across multiple data sources and methods. This information can inform education sector discussions and programming related to the scaling up of effective school characteristics based on locally sourced research findings.

Objective 2

To inform the implementation of the MoES's Fundamental Quality Standards (FQS) for primary schools and assess the degree to which FQS indicators are predictors of school effectiveness.

Objective 3

To inform other key policy areas for Lao PDR, including the implementation of the new primary curriculum and school responses to the COVID-19 pandemic.
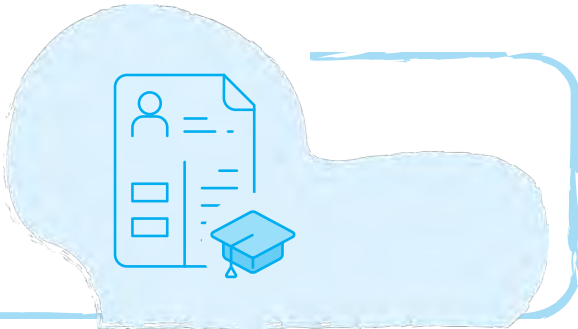
The report is divided into six sections. Section 2 provides a brief overview of the analytical framework that explains the research questions, sampling, instrumentation, data collection and data analysis methods. Sections 3, 4 and 5 detail the main results from the data analysis, organized by the three main sets of research questions. Section 6 summarizes the main findings and policy recommendations.

2. Research methodology

Research methodology

2.1. The positive deviance research design

The DMS research methodology identifies positive deviant schools, or schools that are highly effective compared to other schools that are located in similar areas and have similar resource levels. The research then analyses behaviours and practices at these effective schools and investigates how these practices can be implemented in lower performing schools in similar contexts to improve education quality across Lao PDR.

The research is implemented sequentially, with multiple stages of data collection and analysis. The DMS research leverages both quantitative and qualitative methods and incorporates a strong participatory approach through co-creation with relevant education stakeholders, especially the MoES.

Three research questions are addressed in this study:

Research question 1

How do school management and teaching-learning environments differ in highly effective schools compared with less- and average-effective schools? As student learning falls below expectations, the results from this research provides insights on key policy levers the MoES can leverage to improve learning outcomes.

Research question 2

What implementation and quality barriers are present in the system beyond the factors that separate highly effective and less effective schools? In addition to identifying the differences in practices and behaviours of highly effective and less effective schools, this research highlights challenges faced by all schools and policy priorities for addressing these challenges.
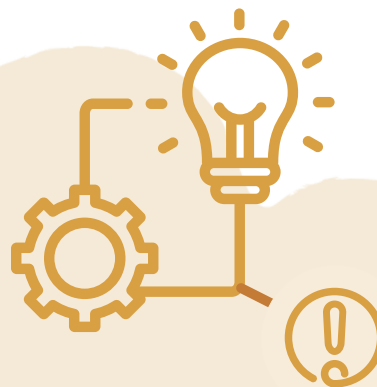
How well do the FQS[1] indicators predict school effectiveness? The FQS were launched in 2020 and are currently being expanded to include new content (e.g., FQS Part 3 indicators on student learning), reporting mechanisms for data to be uploaded onto Lao Education and Sports Management Information System and use of information (see Box 1 for more information on FQS). However, the ability of the FQS Part 1 and 2 indicators to identify highly effective and less effective schools is unknown. The data from this research provide an initial validation of FQS and identify indicators correlated with performance based on external data sources.

2.2. Sampling and school selection

Quantitative sample selection

Two sources of student assessment data were used to identify positive and negative deviant schools for the quantitative sample: DEQA student assessment data collected across 119 public schools in Lao PDR, and SEA-PLM data collected across 200 public schools. Schools were selected through a two-step process. First, student assessment data were analysed to assign each school an achievement residual that captured the difference between the school's actual average student achievement level and its expected level given the characteristics of the school and its students. Schools with large positive residuals are performing higher in assessments than other schools with similar characteristics, while schools with large negative residuals are performing at a much lower level than expected given their contextual characteristics. Schools were classified into high, average and less effectiveness categories. Then, 40 highly effective (or positive deviant) schools were matched with 40 average and 40 less effective schools. Overall, the three categories of schools have very different levels of student performance, but similar school and student characteristics (See **Table A3** in **Appendix A**). In total, 120 public primary schools from eight provinces spread across the north, south and central regions of the country comprise the quantitative sample. All sampled schools offer primary grades 1–5, and roughly 70 per cent are located in rural areas. This process is explained in more detail in **Appendix A**.

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[1] Aligned with the ESSDP 2021-2025, the MoES has been developing FQS to support schools in defining their development goals and guiding schools' holistic development with the ultimate goal of enhancing student learning.

From the quantitative sample of 120 schools, 12 schools across four provinces were chosen for qualitative data collection. It was necessary to identify districts that were not subject to COVID-19 travel and access restrictions. Within this reduced set of available districts, the best matches of highly versus less effective schools were identified, with preference given to matched sets within the same district or province. The original sample included six matched sets of positive deviant (highly effective) and negative deviant (less effective) schools. However, during data collection in March–April 2022, the sample was modified slightly due to updated COVID-19 related travel restrictions. As a result, only five matched sets of positive-negative deviant schools were visited, plus two additional negative deviant schools. (See **Tables B1** and **B2** in **Appendix B** for further sampling details).

2.3. Data collection and analysis

Data collection instruments were co-created through an iterative process between the MoES and the UNICEF Innocenti DMS research team. Quantitative surveys were developed for students, teachers, school principals, Village Education Development Committee (VEDC) members and district staff, and covered a range of topics include student-teacher interaction, classroom teaching and learning characteristics (including pedagogical practices), the classroom and school climate, the work and support environment for school staff, teacher capacity, the school block grants (SBG), and the work activities of District Education and Sports Bureaux (DESB) staff members. In total, 1,780 students, 361 teachers, 120 school principals, 333 VEDC members and 211 DESB staff members were surveyed (see **Table A2** in **Appendix A)**. Quantitative analysis was undertaken using basic statistical summaries with additional robustness checks and regression analyses. For teachers, in addition to the quantitative survey, DEQA staff created

a content knowledge assessment in Lao language and mathematics using questions drawn from curricula covered in the primary textbooks. The questions included a mixture of written response 'partial credit' items and multiple-choice questions with a single correct answer. A total of 310 teachers completed this assessment.

Qualitative data collection instruments included individual interview guides for teachers, school principals and parents and a focus group discussion instrument for students. The qualitative instruments were structured around seven thematic domains, including pedagogical practices, school climate, school management, decentralized level involvement, implementation of the new curriculum, parental and community engagement and COVID-19 pandemic response. In total, 144 students, 33 teachers, 12 school principals and 36 parents participated. Qualitative data was transcribed, translated and then coded using NVivo software. Different coding techniques were used, including automated and structural coding, deductive coding based on key dimensions, inductive coding that followed emerging themes, and simultaneous coding. Coding of the data was conducted without knowledge of the school's effectiveness category. When the coding was complete, matched schools were compared to one another, with attention paid to their contextual characteristics. Any major differences between positive and negative deviant schools were identified and analysed in more depth. The analysis also examined practices of interest across all schools on specific topics.

An institutional review board approved the DMS global research protocol for primary and secondary data analysis. Ethical protocols were revised and adapted to Lao PDR before undertaking primary data collection. All data preparation, collection and analysis procedures at every stage of the research followed UNICEF ethical principles, including respecting participants, ensuring ongoing consent and confidentiality, and preventing potential risks of harm.

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2 Quantitative and qualitative data collection instruments are available upon request from the Data Must Speak research team.

2.4. Study limitations

There are several limitations to the research:

The student assessment results that were used to assign schools to high, low and average effectiveness categories can be measured with error. This process relied on statistical modelling based on estimated parameters.

Participants engaged in data collection activities may be reluctant to criticize specific persons (i.e., school principals) or make statements that would appear critical of the overall system as a result of cultural norms and other factors, which may influence survey results and qualitative findings.

While student assessment data are taken from the 2018/19 and 2019/20 school years, the quantitative data were not collected until the 2020/21 school year, and due to COVID-19 travel restrictions, the qualitative data were collected in the 2021/22 school year. This means that the school effectiveness category may have changed since the original classification

The qualitative data sample only included 10 rural schools and two urban schools. This distribution does not reflect the overall geographic makeup of the 120-school sample or the national population.

School matches were not exact since it was not possible to find schools with identical proportions of certain characteristics (i.e., Lao-Tai students or equal enrolments). Also, some of the matches were between schools from different provinces.

All references to teaching and management methods are based on participants' opinions and are not based on actual observations.

The use of matching means that the results from the study cannot be automatically and generally applied to all schools in the country, or even to the 120 schools included in the quantitative analysis.

While results from the quantitative analysis are often significant, they are generally modest in size, and evidence triangulated from both quantitative and qualitative sources in some instances is limited.

3. Characteristics of highly effective schools

Characteristics of highly effective schools[3]

Key findings

Highly effective schools focus more on learning for all students, both inside and outside the classroom. Specific practices include teachers checking students' work during class more frequently, monitoring students with lower performance more closely and teaching until all students understand the content.

There is some evidence that highly effective schools are better managed. Areas distinguishing highly effective schools include principal engagement, collaboration and reporting to parents.

Teachers at highly effective schools have significantly higher levels of content knowledge. Teachers in highly effective schools scored higher on a Lao language and mathematics assessment than teachers in average and less effective schools.

Highly effective schools are twice as likely to have a female principal than average and less effective schools. This finding is based on comparisons of schools that share similar contextual characteristics and it is not simply a result of highly effective schools being located in urban areas.

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[3] Although the study focuses on the features of highly effective schools, in some instances, quantitative findings reveal characteristics of less effective schools. For some indicators, the highly effective school average is not significantly different from the remaining schools in the sample, but the less effective school category average is significantly lower than other schools.

Highly effective schools focus more on learning for all students

A common feature of effective schools is an institutional focus on learning outcomes and a commitment to ensuring that all students are learning (Organisation for Economic Co-operation and Development [OECD] 2016b). There are several differences between highly effective and less effective schools that suggest meaningful differences in their teaching and learning environments and the degree to which highly effective schools focus on student learning for all. However, the evidence does not firmly establish that these characteristics are present only in highly effective sample schools and not present in less effective schools.

Students, teachers and school principals confirm some practices reflective of targeted instruction and formative assessment are significantly different in highly effective schools. Students in highly effective schools more frequently reported teachers continuing to teach until all students understood and checking students' classwork and homework. Survey results from teachers and principals in highly effective schools confirmed these results. Teachers and school principals from highly effective schools indicated more frequent provision of support for students requiring extra help, with students from these schools agreeing that their teachers provided extra support when they needed it. Finally, teachers in highly effective schools reported higher levels of confidence with student assessment practices than teachers from less effective schools.

Principals and teachers in highly effective schools reported closer monitoring of low performing students' learning and their change over time as compared to less effective schools. Although remedial classes for struggling students were organized in almost all schools in the qualitative sample, highly effective schools provided more detailed examples of how they tracked learners' performance. For example, one

teacher indicated that they would walk around the classroom and note down the names of students who were having difficulties with specific topics. The teacher would then work with these students on that specific topic in the afternoon or the next day to improve their understanding of it. Other highly effective schools reported summarizing the monthly results of all students and tracking how their performance had evolved over a month, with a specific focus on low performing students. One principal from a highly effective school also mentioned giving small gifts to teachers who were supporting low performing students.

The qualitative data uncovered additional practices reported by teachers and principals in highly effective schools that are consistent with a focus on learning for all students:

- One highly effective school installed 'reading corners', areas of classrooms dedicated to books. One teacher at this school mentioned they would lend students story books to read at home. Teachers would randomly pick an extract from a book for a student to read (e.g., some arranged letters, vowels, then words). If students could not do it, they would take the book back home with them and repeat the exercise the next day.

- Based on training they received, teachers from two highly effective schools underlined the importance of decoding letters while teaching students to read. In particular, one teacher insisted that they would revisit these elements with grade 1 students and reteach until they understood.

- In one highly effective school, a teacher would visit the homes of students who were often absent, although this was also observed in some less effective schools. However, in this case, after recognizing that a mother was unlikely to let her child regularly attend school, this teacher gave Lao language and mathematics lessons to the mother so she could teach the child at home.

Teacher content knowledge is significantly higher in highly effective schools

Teacher content knowledge remains low, with roughly half of teachers scoring 50 per cent or less in an assessment based on primary school curricula. None of the teachers assessed were able to answer all questions correctly. These findings are consistent with other evidence of low levels of teacher content knowledge in Lao PDR (World Bank 2017).

However, teachers in highly effective schools have significantly higher content knowledge. The comparisons in Figure 1 show the average scores of teachers in highly effective schools being 20 points or higher in both mathematics and Lao language. In mathematics, teachers from highly effective schools answered 60.1 per cent of questions correctly compared with teachers from less effective schools, who answered just 53 per cent correctly. In Lao language, overall scores for teachers remained low, but teachers from highly effective schools still scored higher than their peers.

Teachers in highly effective schools have higher content knowledge even when controlling for various contextual features (school size, teacher ethnicity, student socioeconomic status [SES], etc.). These results also found that non-Lao-Tai teachers scored significantly lower on the assessment, and that teachers with higher levels of education scored significantly higher. However, the quantitative data do not show large differences in levels of education or years of experience among school staff working in highly effective schools and less effective schools.

There is difference between perceived and actual teacher content knowledge. Almost all teachers, regardless of their school's effectiveness, reported having good knowledge of Lao language or mathematics. School principals were even more positive. For example, 87.5 per cent of principals in less effective schools strongly agreed that their teachers had good Lao language skills, despite teachers' low performance.

Figure 1. Teachers' scores on mathematics and Lao assessment
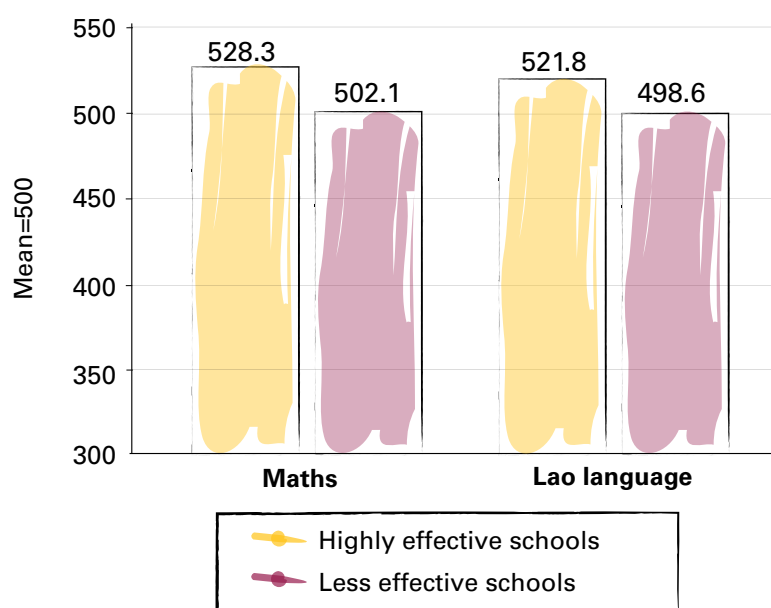
Source: Department of Education Quality Assurance, 2020/21.

There is some evidence that principals at highly effective schools are more engaged and promote a more collaborative work environment

Overall, school staff were generally positive about school management. However, the data sources do diverge somewhat with regards to school management practices in high and less effective schools. **In the quantitative surveys, more school principals from highly effective schools reported collaboration and engagement with teachers than those from less effective schools (Figure 2).** Twice as many principals at highly effective schools reported that they often observed teachers as leaders at less effective schools. Similar results are found in the areas of giving feedback, ensuring that teachers take responsibility for improving learning outcomes and supporting cooperation among teachers. Principals at highly effective schools were also significantly more likely to agree that the school principal involved all teachers when making decisions.

Teacher survey data provides some additional confirmation that school principals at highly effective schools are more engaged with teachers and parents, although these differences are not as large or robust as those that were identified for teacher capacity and teaching methods.

The qualitative data analysis did not identify consistently different school management practices in highly effective schools compared to less effective schools, which means that the differences from the quantitative data analysis should be treated with some caution. However, there were references to highly effective school management practices relevant to the overall education sector (see **section 4**). For example, one teacher from a highly effective school mentioned their principal compared their school to other schools in order to implement observed best practices:

> The principal does compare this school to others and takes their strengths to implement in this school. If there is something that we can't effectively implement, we will need to improve. […the] principal always takes many good things to present to us.

Figure 2. School principal engagement and collaboration indicators by school effectiveness category

Highly effective

Less effective

	Highly effective	Less effective
Observe teachers	3 / 54.6 / 42.4	8.6 / 71.4 / 20
Give feedback to parents	27.3 / 72.7	2.9 / 51.4 / 45.7
Give feedback to teachers	39.4 / 60.6	2.9 / 54.3 / 42.9
Ensure teachers take responsibility (improving)	36.4 / 63.6	31.4 / 68.6
Support cooperation among teachers	36.4 / 63.6	54.3 / 45.7

● **Never (%)**   ● **Sometimes (%)**   ● **Often (%)**
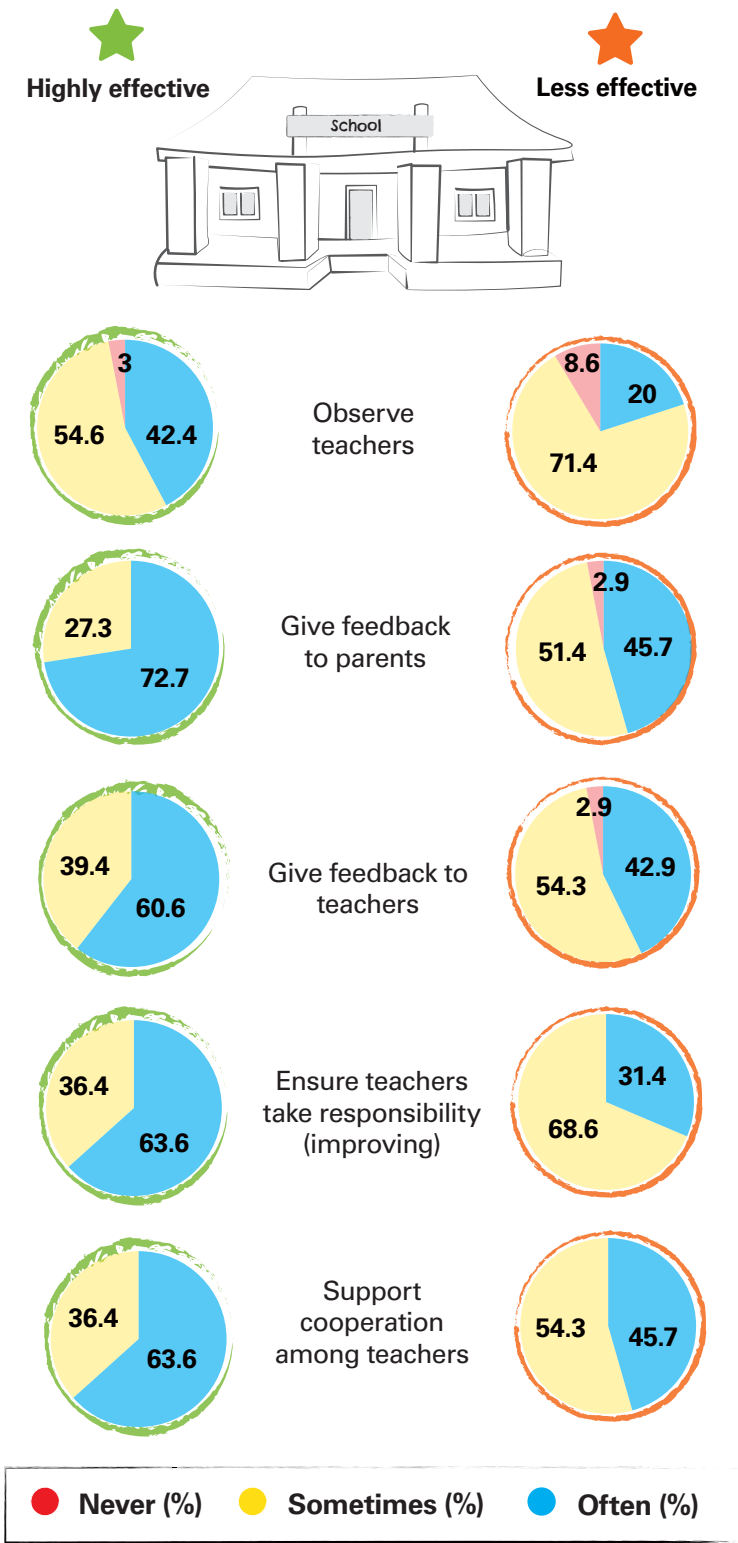
Source: Department of Education Quality Assurance, 2020/21.

Highly effective schools are more likely to have a female principal

There is a growing body of evidence that suggests students attending schools led by female principals perform better in a range of education outcomes (Bergmann, Alban Conto and Brossard 2022). **In Lao PDR, student learning is higher in female-led schools, even when controlling for community, school and student characteristics.** Around 41 per cent of school principals in highly effective schools are female, compared with just 16 per cent for average and less effective schools.[4]

Female leaders may be using more effective school management practices and creating better teaching and learning environments. Evidence from the quantitative analysis suggests certain practices are more evident in female-led schools, including teachers being more likely to report preparing lesson plans, correcting student work and providing feedback, and being less likely to come late or leave early.

However, women remain underrepresented in school leadership roles in Lao PDR. Despite these promising results, only 27 per cent of school principals in the country are women (MoES, Lao PDR 2023). Better performance in female-led schools may be a result of selection or filtering mechanisms, where women selected for school principal roles have proven themselves to be especially effective leaders. However, the data collected for this study does not provide more information on these elements. More evidence is needed to understand women's representation in school leadership, the barriers they face to accessing leadership roles and the practices and behaviours they may be utilizing that are contributing to student learning.[5]

Figure 3. School principals by school category and gender
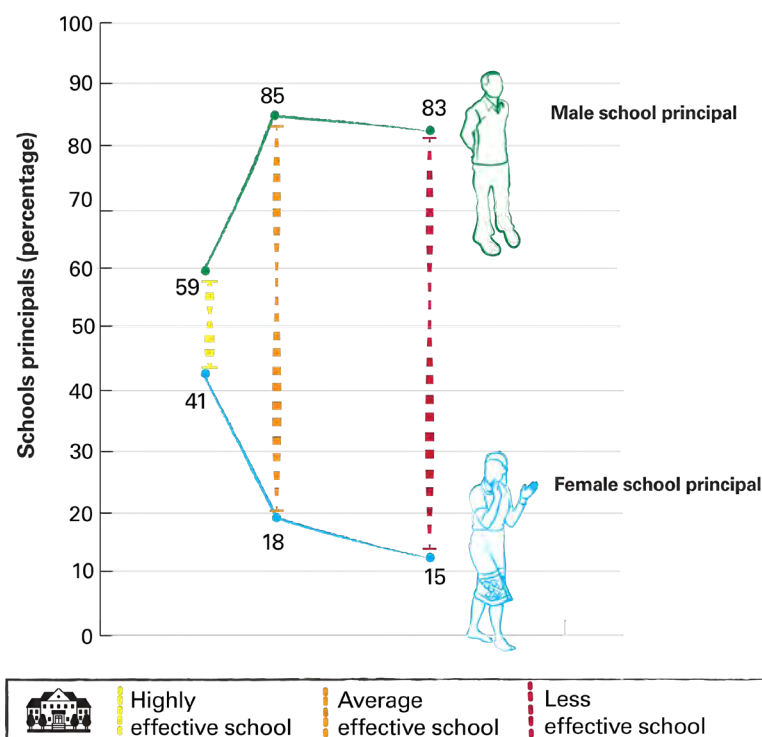
Source: Department of Education Quality Assurance, 2020/21.

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4 Highly, average and less effective schools were matched by location, so female principals are not concentrated in highly effective urban schools and being compared with less effective schools from rural areas. However, the schools with female school principals have somewhat larger enrolments of Lao-Tai children. It is possible that other unexplored contextual features of these communities may be influencing these results.
5 See the joint UNICEF Innocenti and UNESCO-IIEP Dakar Women in Learning Leadership research programme, which aims to expand the evidence base on gender and school leadership.

4. General findings on education quality

General findings on education quality

Key findings

Although students, teachers and school principals report a positive school climate in many respects, students also mention very serious school violence problems. Both the quantitative and qualitative data confirm these somewhat contradictory findings. School climate problems are more prevalent in larger, urban schools. Moreover, boys are more likely than girls to be involved in instances of violence.

Principals and teachers identified several challenges related to the implementation of the new curriculum. They cited limited training time and heavy workloads when adapting new lesson plans. School closures caused by the COVID-19 pandemic have exacerbated these challenges by reducing the time available to complete the curriculum.

Teachers and school principals are positive about the school management and support systems. Principals and pedagogical advisors (PAs) assume important responsibilities in creating environments that support continuous learning and improvement.

While the delivery process for SBGs has been streamlined, there is still room for improving their implementation. A few schools still report that they do not receive the full amount of the grant and/or experience delays in its delivery. Also, less than half of the schools meet the requirement for spending 60 per cent of the SBG on priority teaching and learning categories.

Most schools offered remote learning during the COVID-19 school closures, but they struggled to keep up with the curriculum and engage all students. These challenges are partly due to technology constraints in many communities and the difficulty of completing the curriculum when face-to-face teaching time is reduced.

This study has also provided evidence on challenges faced by all schools regardless of their effectiveness category, such as implementation of the new curriculum and the impact of COVID-19 school closures. Findings that are supported by both quantitative and qualitative data are given priority in this discussion. However, for some topics, the evidence is only available from one source, or the results are inconsistent across sources.

Although students, teachers and school principals report a positive school climate in many respects, students also mention very serious school violence problems.
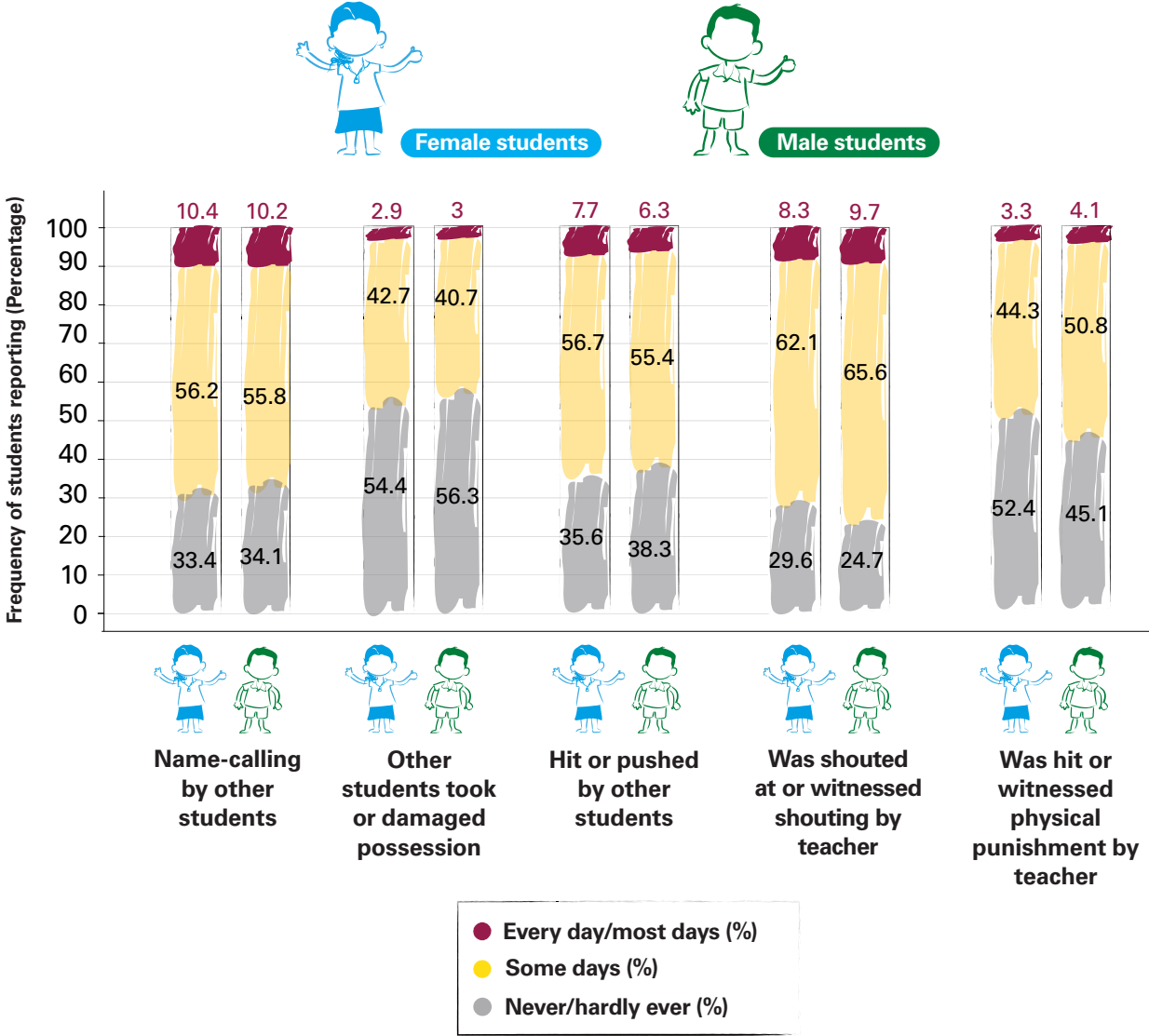
Both quantitative and qualitative data provide nearly identical findings on the school climate, which present a complicated and somewhat contradictory picture. The quantitative data show that 94 per cent of students strongly agreed they loved being at school, while 88 per cent strongly agreed they feel safe at school. Students were also rather positive about teachers: roughly three in four students strongly agreed they got on well with their teachers, and less than 3 per cent of students disagreed. During focus group discussions, students often explained why they liked being at school, underlining the importance of education to their futures and saying that they wanted to learn as much as possible while at school. They also reported generally good relationships with their teachers, classmates and principals.

Across most schools, principals and teachers reported a supportive working climate and good collaboration among teachers. In the quantitative surveys, nearly all principals and teachers agreed that they were satisfied with their jobs. In the qualitative interviews, principals and teachers also reported generally positive views on principal-teacher relationships, as well as relationships between teachers.

However, the positive views about the school climate among students and school staff sharply contrast with student reports of frequent instances of bullying and violence between students and conflict with teachers, including physical punishment. The qualitative data show that in numerous schools, students reported heavy fighting, bullying and teasing among students, as well as physical punishment by some teachers. Multiple schools also suffered from poor classroom discipline, as students reported noisy classmates disrupting the learning process and a lack of measures by schools to ensure a conducive environment for studying. Students considered these issues critical obstacles to their effective learning. Some practices were highlighted to prevent and punish such violent behaviour, including scolding and warning students, speaking with their parents, or asking them to do physical activities (e.g., running around the school, climbing trees). Students also reported that some teachers would hit students as a punishment for violent behaviour.

Figure 4 summarizes quantitative data from student surveys that illustrate similar findings. Roughly half of students reported that, on some days, other students called them names, took their belongings, and hit or pushed them. Nearly two thirds of students reported that teachers shouted at them or other students on some days, and 8 per cent indicated this happened even more frequently. Almost half of the students also reported that the teacher used some kind of physical punishment on some days, with nearly 4 per cent indicating that this happened more regularly.

Figure 4. Frequency of students across all schools reporting school climate problems by student gender

Female students   Male students

Frequency of students reporting (Percentage)

	Name-calling by other students		Other students took or damaged possession		Hit or pushed by other students		Was shouted at or witnessed shouting by teacher		Was hit or witnessed physical punishment by teacher	
Every day/most days	10.4	10.2	2.9	3	7.7	6.3	8.3	9.7	3.3	4.1
Some days	56.2	55.8	42.7	40.7	56.7	55.4	62.1	65.6	44.3	50.8
Never/hardly ever	33.4	34.1	54.4	56.3	35.6	38.3	29.6	24.7	52.4	45.1

● Every day/most days (%)
● Some days (%)
● Never/hardly ever (%)

Source: Department of Education Quality Assurance, 2020/21.

Results from the quantitative data analysis on the correlation between school violence and students' learning achievement in Lao PDR are not conclusive. The analysis demonstrated that bullying and corporal punishment are significantly more likely in urban and larger schools, where students are more likely to outperform their peers in other schools. This in part may help to explain why the overall correlation between students' learning achievement and several school violence indicators is positive. However, the challenges of bullying and violence are evident, regardless of how the school is performing. Student-student bullying and student-teacher violence indicators are also not significantly associated with ethnicity, teacher gender, or any other student/teacher background characteristics. In addition, there is substantial variation by gender. Across data sources, **boys were significantly more likely than girls to report being punished by teachers**. The variation by gender and school location is consistent with global school climate research (UNESCO 2017; UNESCO 2019; National Commission for Mothers and Children, Lao Statistics Bureau and UNICEF Lao PDR 2019).

A large body of literature supports that school violence negatively impacts "the physical and mental well-being of learners, their ability to learn and their educational outcomes. Victims and witnesses of school violence are more likely to miss school, have lower grades and/or drop out of school entirely. School violence also contributes to their lower self-esteem, depression, anxiety, and other mental health issues" (UNESCO International Institute for Educational Planning [IIEP-UNESCO] 2021b). Literature from around the world also emphasizes that schools taking students' well-being seriously are more likely to improve academic achievements (UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific 2017). International and regional large-scale assessment data suggest that ending violence in schools could result in aggregate learning gains of about 2 per cent compared to baseline values (Wodon et al. 2021).

Principals and teachers identified several challenges related to the implementation of the new curriculum

The MoES has been rolling out a new primary curriculum, starting with grade 1 in 2018 and continuing with grade 5 in 2023. This curriculum was supported through provision of training for teachers and school principals on the new content and accompanying materials.[6]

School principals were generally positive about the overall goals and eventual impact of the new curriculum. At least three quarters of school principals strongly agreed that the new curriculum was needed and that it would increase their job satisfaction and/or fulfilment; the same proportion of school principals were glad the new curriculum was being implemented. However, a small percentage of principals

(3.4 per cent) did not agree that they were capable of implementing it. Some teachers in qualitative interviews also appreciated the strengths of the new curriculum, saying that it included more interactive activities for students and improvements related to the student-centred and problem-solving approaches.

The implementation and capacity concerns raised by some principals in the quantitative surveys were echoed in qualitative interviews with teachers. **Numerous schools, regardless of their performance, reported that they were experiencing considerable challenges in implementing the new curriculum.**[7] Many teachers reported that they had not yet been trained and had to rely on their colleagues to receive information on the new curriculum. Those who received training underlined that it was very short and did not allow them to become fully familiar with the new content, pedagogical strategies and materials. Teachers mentioned that some new topics were very difficult and that they struggled to master them after such a short training period. One teacher noted that "they gave training on 18 lessons to teachers over 1.5 days" and underlined that they remained confused after this training.

The transition period is also difficult, as teachers need to prepare completely new lesson plans based on the new curriculum. School closures created additional challenges for successful implementation of the curriculum as teachers are still struggling to catch up with the official programme. The new mathematics curriculum was described as particularly challenging, as teachers mentioned confusion about the new teaching strategies, student assessment methods and the content more broadly. Therefore, many teachers still partially or completely rely on the old curriculum.

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[6] At the time of quantitative data collection (2019/20), training had not yet reached the upper grades of primary school. Consequently, quantitative survey questions related to the new curriculum implementation were only included in the school principal survey and not the teacher survey.

[7] It is important to note that the curriculum implementation challenges identified come mainly from the qualitative data collected from 12 schools.

Teachers and school principals are positive about the school management and support systems

Several management practices were more frequently present in highly effective schools based on the quantitative data. Nevertheless, considering both the quantitative and qualitative data sources, there is limited evidence that highly effective school management and support environments are more effective than in other schools. The data are therefore more informative about general implementation features and challenges in school management.

Principals assume important responsibilities in creating environments that support continuous learning and improvement. They also often facilitate teachers' participation in peer learning activities. Across most of the schools, peer learning activities take place at the school and cluster levels:

- **At the school level**, some of these activities are well structured, as teachers have scheduled meetings with the principal and other teachers (e.g., teacher reflection meetings, coaching sessions). Others appear less structured as teachers explained how they consulted their peers when they had a specific pedagogical challenge. In some schools, teachers help each other by creating teaching materials and lesson plans. In addition to peer teachers, PAs also play a role in the peer learning process. One teacher noted:

> **"** I learn from other teachers on what I don't understand or need to learn more about. Sometimes I will meet the PA. The PA will visit us, and I will discuss what I don't understand with them. **"**

- **At the cluster level**, principals report meeting and visiting a given school to observe classes and discuss challenges faced by teachers and principals, as well as possible solutions. Teachers of the same grade levels from different schools would also meet to observe classes taught by their peers and discuss the issues they faced.

These peer learning activities are appreciated by teachers and allow them to conduct exchange on the difficulties they are facing, learn from each other and receive concrete suggestions on how to improve further, especially when it comes to pedagogical practices.

The qualitative data also addressed issues related to **instructional leadership roles of principals**, such as establishing the importance of teaching and learning to improve learning outcomes, which has been shown to increase teacher collaboration and sense of purpose in other contexts (OECD 2016a; IIEP-UNESCO 2021a). Teachers emphasized that they turned to their principals for any questions about the implementation of the new curriculum or content and pedagogy. Principals also shared knowledge they gained from in-service training with teachers at their schools. Classroom observations with feedback sessions and regular meetings described earlier, or more ad hoc exchanges between the principal and teachers, were mentioned as opportunities for exchange.

As one principal explained:

> **"** We just observe the teaching class. If this teacher has any issues, then we take that for further discussion and solution. If their teaching is not good, then we help that teacher to improve those areas. Or we can also solve it during the monthly meeting, we can further discuss the daily lives of teachers, and when we find something wrong with any teachers, we try to help them. We can openly share and discuss during that meeting. We do have our internal pedagogical advisory session; we can discuss and improve our technical work as well. **"**

School staff were generally positive about the management and support environment. Over 90 per cent of teachers in the quantitative survey strongly agreed with most of the statements about positive management and collaboration practices in schools. Some of these practices were areas where principals were less likely to report needing training, including leadership and school management (20.3 per cent), promoting collaboration among teachers (20.3 per cent), and observing classroom instruction and providing feedback (17.8 per cent).

The most frequently cited training need cited by school principals was teaching and learning management (58.5 per cent), followed by the curriculum (48 per cent) and the effective use of SBGs (38 per cent).

School staff reported fairly regular visits from PAs that addressed a range of topics, with lesson planning and the new curriculum being the most frequently mentioned. A total of 87 per cent of school principals indicated that the PA had visited their school at least once during the last two years, whereas 93 per cent of teachers reported the same. However, only about four out of five teachers reported that the PA had also visited their classroom at least once during the last two years.

VEDCs reported being engaged in a range of activities to support the development of their schools, on average having over four meetings per year. The most frequently cited support activities to schools included monitoring student attendance (96.7 per cent), monitoring implementation of the school development plan (92.6 per cent), and mobilizing villagers to help at school (89.9 per cent).[8] VEDCs also reported monitoring teacher absenteeism (77.2 per cent), which is not officially included in their mandate. Teacher absenteeism remains a serious challenge to the participation and learning of students in many schools across the country (World Bank 2016; Lao PDR and UNICEF 2018; MoES, Lao PDR 2020). However, these studies suggest that the reported monitoring of teacher absenteeism by VEDC members is either overstated or insufficiently effective, possibly due to a lack of follow-up action by school principals or DESBs. VEDCs also reported activities such as organizing an education fund (74.9 per cent) and monitoring SBG expenditures (77.5 per cent), both of which align to their current mandate to support monitoring SBG expenditures and mobilizing support from the community.

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[8] This includes contributing to school construction, maintenance of teaching and learning materials and equipment, and working with teachers and schools to solve issues, including oversight of student attendance.

The quantitative and qualitative data consistently show that school staff are positive about the school management and support environments. In fact, very few negative observations were made about these processes, which may be related to reluctance to criticize school staff and DESB officials. One concern with the overall findings for school management is that the generally positive views contrast with the system's actual performance, especially based on measures of student and teacher achievement. Furthermore, previous research has documented management problems, such as high rates of teacher absenteeism (World Bank 2016), that were not mentioned in the data collection.

Although the delivery process for school block grants has been streamlined, there is still room for improving their implementation

The Government of Lao PDR takes full ownership of SBG financing, and different actors, especially development partners, want to learn more about the SBG to improve implementation. The quantitative data collection included a very detailed review of SBG transfers and spending history, together with questions for school principals, teachers and VEDC members about implementation dynamics.

Although almost all schools reported completing the school-based management (SBM) tools that are integrated with the SBG, including the self-assessment and school development plan, and reported having most of the SBM and SBG-related documentation, the actual verified percentage of documents was much lower. Based on the verified documentation, there are some concerns about both the availability of key documents, such as the SBM manuals that were rarely found in schools, as well as the implementation of key features of SBG, like receipts from spending or minutes of meetings.

A detailed review of recent transfers does not suggest major challenges in the delivery of SBGs, but small issues, such as a small percentage of schools still not receiving the grant or it being late, remain. Almost all schools confirmed receiving both the government and GPE II[9] transfers, with high percentages reporting receiving the full amount. Moreover, over 90 per cent of schools reported receiving the SBG by bank account, which has been a key reform in the GPE II era. However, there is still some room for improvement. Firstly, there are schools that reported not receiving SBGs: this is difficult to verify with the existing information but is nonetheless a concern. Secondly, several schools reported not receiving the full amount. Delayed delivery continues to be an issue.

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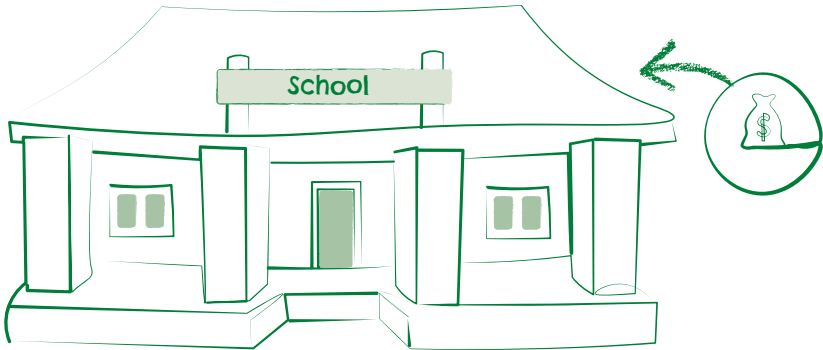
[9] The second Global Partnership for Education project (GPE II) in Lao PDR aims to support the Government of Lao PDR in improving pre-primary and primary education quality by (i) providing additional funding, including SBGs, at school, district and provincial levels, as well as strengthening overall capacity to manage these resources to achieve minimum education quality standards, and (ii) enhancing the teaching and learning environment in schools through improved teaching practices, instructional resources and analytical products to support early grade literacy.

On average, schools reported spending about 56 per cent of the total SBG on the priority spending areas that focus on teaching and learning, which is below the required 60 per cent minimum. For the entire sample, only 42 per cent of schools met the 60 per cent level for the priority spending areas in 2019/20, and 45.2 per cent met this threshold in 2020/21. Only about 7 per cent of the SBG was spent on non-allowable categories, including consumables, extra teaching classes and 'other' costs.

Finally, school principals commonly referenced several areas for improving the SBG programme, including increasing the amount of SBG (79.7 per cent), reducing the delays in delivery (72.9 per cent), providing SBG in one transfer only (43.2 per cent) and expanding the allowable categories for SBG spending (32.2 per cent). In addition, 28.8 per cent of the school principals referred to more training on SBG as a necessary improvement.

Most schools offered remote teaching during the COVID-19 school closures, but they struggled to keep up with the curriculum and engage all students in remote learning

The qualitative data collection provided an excellent opportunity to assess the effectiveness of school responses to the COVID-19 pandemic in Lao PDR.

Schools put in place a variety of remote learning activities, which included:

- Relying on a 'homework box', where teachers would systematically (once or twice a week) leave homework for students, and then collect it from there. Some schools simply asked students to come and pick up homework at school or at teachers' houses, informing them that it was ready through the village speaker system, Facebook or phone.

- Using WhatsApp or other applications to take photos of homework and send it to students, who would then reply, with teachers reviewing exercises accordingly.

- Distributing books to students and assigning homework for them to do, or simply asking them to continue learning with parents.
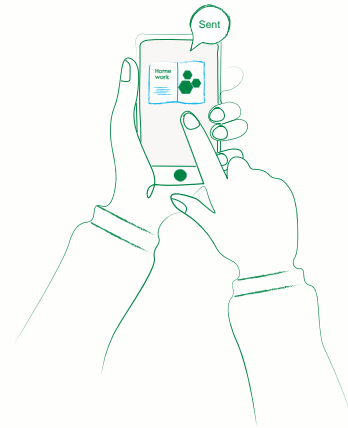
As requested by the DESB, teachers focused on three major subjects during school closures: Lao language, mathematics and World Around Us. There was more emphasis on ensuring higher grades, especially grade 5, continued learning through remote modalities, but remote learning was more difficult for lower grades.

Although most schools implemented some remote learning activities, school staff indicated that they struggled to ensure effective learning activities during closure periods, and learning stopped for some students.
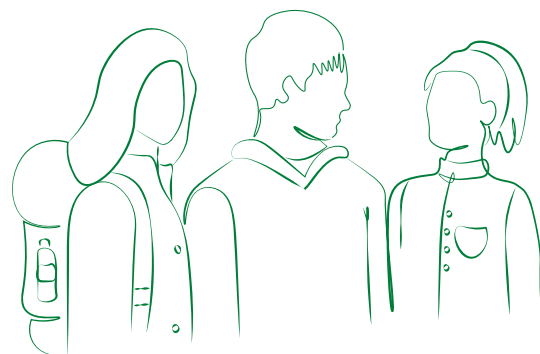
Many of them lacked access to the necessary technologies (e.g., smartphones, laptops, internet connection), or did not know how to use them for studying. In addition, some students could not be reached in order to participate in remote activities for various reasons (e.g., teachers did not have contact numbers for all parents; they were not at home when teachers tried to reach them). This was especially true for students who lived far away from school. Some students were simply not able to pursue learning even if they could access remote activities, due to their engagement in household activities. Parents often did not have the resources and/or knowledge to support the online learning of their children. Parents and teachers agreed that remote teaching was not as effective as face-to-face teaching.

Parental support was key during school closures, and largely determined whether students continued learning or instead focused on housework. Some parents helped their children learn when schools were closed, but this was not the case for all students. Global literature supports that the engagement of parents in students' learning during the pandemic was key for continued learning, especially in households with limited access to technology (Brossard et al. 2020).

School-level actors identified other effects of the school closures:

- Low performing students were particularly affected, as their learning outcomes deteriorated more severely than their peers.

- Teacher salaries were delayed. Families were also affected financially as some of them began to have difficulties in paying school fees and buying necessary learning materials.

- Teachers could not complete the entire planned curriculum once schools reopened, as learning had substantially slowed down. Teachers had to go back to reteach lessons that were taught remotely, as students struggled with the content. Many students forgot important content during the school closures. Teachers have therefore been in a hurry to finish the curriculum that needs to be taught in a shorter period of time. Some are trying to shorten the lessons and focus on the most important aspects to cover more content.

Using Fundamental Quality Standards indicators to predict school effectiveness

Key findings

Overall, school performance indicators based on the Fundamental Quality Standards (FQS) parts 1 and 2 show that highly effective schools perform differently than less effective schools. To some extent, this validates that FQS indicators are achieving their intended objective of monitoring school performance.

The third objective of this research is to assess the potential validity of FQS part 1 (infrastructure) and part 2 (school processes) as predictors of school effectiveness. The categorization of schools into high, average and low effectiveness for the positive deviance research, is similar to the green (strong), yellow (adequate) and red (underperforming) categorization scheme that will be used by DEQA in their FQS-based monitoring and support system. The main difference is that the positive deviance approach is based on external student assessment data and questionnaires, while the FQS system will be based on school self-reporting. More information on how the various indicators from the DMS research questionnaires align with the FQS parts 1 and 2 standards can be found in **Table C1** in **Appendix C**.

Most FQS indicators are positively correlated with student achievement. Schools with teachers that report in the quantitative surveys high capacity or engagement in certain indicators, including preparing lesson plans (FQS 2.9), having good knowledge in Lao/mathematics (FQS 2.11), giving feedback and other interaction with students (FQS 2.13) and reporting assessment information to parents (FQS 2.15) have significantly higher student assessment scores. By contrast, schools where teachers report lower levels in these indicators are more likely to have lower student assessment scores. This signals the potential of FQS data to identify schools that require more support or additional resources from district and support staff. This is important because the overall goal of the FQS system is to identify low performing schools that require additional support and, when possible, identify teaching and learning and school management areas that require improvement. There are a number of indicators that are only marginally correlated with student achievement (and a few that are negatively associated with achievement).

Collectively, FQS indicators are a fairly robust predictor of school effectiveness. For example, the schools classified as highly effective have an overall factor score[10] of 0.29 standard deviations (SD) on the FQS indicators, which is much higher than the average effective school average (-0.11 SD) and especially the less effective schools (-0.19 SD). The difference in SD when comparing high and less effective schools is nearly 0.50 SD, which is a fairly large gap between school categories based on the FQS data (see **Table C2** in **Appendix C**).

As the FQS system is rolled out in five pilot districts in the 2022/23 school year, it will be necessary to revisit this analysis using schools' self-reported data to assess the degree to which FQS 1 and 2 indicators can predict how well schools perform on student assessments.

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[10] Factor analysis is a data reduction technique that takes a large number of variables such as FQS indicators and reduces them down to a single measure. The factor is interpreted in a similar way to an overall average, but it is different in that each variable has a unique weight in the calculation. Standard practice with factor creation is to set the mean at 0.0 with a standard deviation of 1.0. A factor score of 0.50 means that the result for that category (such as urban schools) is one half of a standard deviation above the mean; by contrast, a factor score of -0.50 refers to an average that is one half of a standard deviation below the mean. Factors are generally interpreted using standard deviations to facilitate comparisons. In general, if the difference between two categories is greater than 0.25 standard deviations then the difference is substantial. Tests of significance are commonly used to determine if the difference between two categories is statistically significant.

Box 1

What are the Fundamental Quality Standards in Lao PDR?

FQS were introduced in 2020 and serve as benchmarks for guiding the holistic development of schools, with the goal of improving student learning outcomes. The FQS have three parts:

School inputs (e.g., how many textbooks the school has, how many blackboards, etc.)
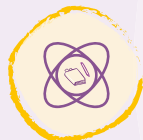
Processes and behaviours (e.g., which important processes and behaviours are part of the school culture)

Student outcomes (e.g., student learning results in Lao language and mathematics)

The FQS-based school **self-assessment supports** schools in identifying:

Existing strengths or 'good practices'[11] in the school, which can then be shared with other schools
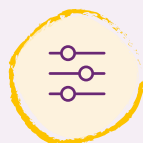
Areas for improvement, which can be included in the school's development plan

Using the FQS as **benchmarks**, schools can be classified into one of the three school support categories:

Strong performing schools (green)

Adequately performing schools (orange)

Under-performing schools (red)

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[11] These could include collaboration among teachers within schools, collaboration among schools in the same cluster, monitoring of teacher attendance, etc.

Categorization is not intended to punish schools, but to ensure underperforming schools are prioritized for support and receive more assistance from DESBs.

The enhanced FQS-based school development process is also ICT-enabled, promoting the use of online questionnaires to support schools in their self-assessment and development planning. A geographic information system-enabled map identifies schools by their support category and provides a school profile that shows the key indicators for each school, including the FQS. This aims to strengthen the evidence base and facilitate better monitoring and development planning by schools and DESBs, as well as provincial education and sports services, the MoES, development partners and other partners.

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6. Policy recommendations

The following policy recommendations are envisaged to support the MoES and its partners in advancing the progress of the ESSDP 2021–2025, ensuring that all children in Lao PDR are learning and able to reach their full potential.

The recommendations are clustered by theme and drawn from the main findings of the study, including (i) characteristics of good practices implemented in highly effective schools that can inform the education sector policy and practice, as well as the challenges faced by less effective schools, and (ii) general findings related to the quality of education that concern all schools in Lao PDR.

1 Investing in teacher capacity with a holistic and strategic approach

Key challenges

This study suggests that teacher capacity – defined by a teacher's content knowledge and pedagogical skills – is a strong predictor of student performance in Lao primary schools. Teachers in highly effective schools have significantly higher content knowledge than teachers from less effective schools. However, teacher content knowledge in the country remains low, with roughly half of teachers scoring less than 50 per cent in an assessment of their mathematics and Lao language knowledge. This emphasizes the importance of further enhancing the quality of teacher education in Lao PDR. The ESSDP 2021–2025 stresses the need for a holistic and strategic approach to the development of the education profession that should span the whole professional lifecycle, including teacher recruitment, pre-service and in-service training, retention, and career progression.

Recommendations

Support all primary teachers to improve their content mastery in Lao language and mathematics through systematic pre- and in-service teacher training. The MoES should ensure both types of teacher education programmes have a strong emphasis on content mastery. The MoES should undertake the planned review of pre-service teacher education programmes and could consider trialing more selective processes for graduates entering pre-service teacher education, given the expected continuation of lower teacher quotas in the coming years. The MoES should also expand continuous professional development opportunities for current teachers through online, hybrid or in-person modalities such as summer school and short courses. It is important to avoid organizing these professional development opportunities during teaching hours, in order to avoid possible teacher absenteeism.

Establish effective pedagogical support systems for education professionals. This could include introducing school clusters as a peer learning mechanism, and creating networks of mentors and coaches to promote collaboration within schools. This would require more effectively aligning the roles and responsibilities between clusters, DESBs and PAs. Teacher training colleges could be expanded to provide both pre-service and in-service professional development for school leaders and teachers. FQS could also be leveraged for professional development needs assessments, planning and evaluation.

Ensure sustainable, strategic and equitable investments in the quality of primary school teachers to improve student performance. Given low teacher capacity and limited education budget in the country, this calls for a significant increase in the share of the non-wage recurrent budget through improving financial management and allocative efficiency within the education budget.

2 Strengthening school leadership and management practices

Key challenges

Skilled school principals are important, as they provide guidance and take responsibility for improving the learning of all students. School principals in highly effective schools promote collaboration, provide support to teachers, engage parents as partners for improving student learning and build trust and respect in schools and communities. However, many school principals report needing further training in promoting academic achievement, implementing new curricula and effectively using SBGs.

Recommendations

Develop school principals' capacity as educational leaders and ensure time for instructional leadership activities within school principals' core tasks. Practices used by school principals in highly effective schools can be reflected in the MoES's upcoming review of the seven core tasks of school principals. Additionally, findings from this study suggest several areas for professional development for school leaders, including fostering collaborative learning cultures, adopting FQS-based school self-assessment, and effectively using SBGs to improve teaching and learning.

Improve gender equity in school leadership. Principals in highly effective schools are more likely to be female, yet women remain underrepresented in the profession. Further research should explore what barriers prevent women from advancing to leadership roles to inform possible policy solutions for recruiting, selecting and retaining women school principals.[12]

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[12] See the Women in Learning Leadership global research agenda, a joint initiative from UNICEF Innocenti and IIEP-UNESCO Dakar.

# 3 Shifting schools towards learning environments that focus on all students' learning

? ! Key challenges

Highly effective schools appear to be more focused on learning for all students and use various pedagogical strategies more frequently, including continuing to teach until all students understand, checking student classwork and homework, and more closely monitoring low performing students' learning progress. These practices are an integral part of formative assessment and related remedial action, which ultimately aims to improve both teachers' teaching and students' learning. In the current context of Lao PDR, embedding the use of formative assessment inside and outside the classroom plays a pivotal role in the implementation of the new primary curriculum, as well as the learning recovery process in the post-COVID-19 context. Implementing formative assessment requires an education system that can monitor the quality of assessment practices and support teachers as needed.

★ Recommendations

Institutionalize formative assessment in teaching and learning practices, including through equipping school principals and teachers with necessary skills and tools. At the systems level, this can include embedding formative assessment in sector planning, teacher education and professional development. It also requires equipping teachers with the skills and tools needed to better assess and monitor students' learning levels through both pre-service and in-service professional development. The MoES could consider developing a toolkit of resources, including remedial, catch-up and accelerated practices and programmes designed for specific subjects, which could help teachers adapt their practices to different learning levels among students. The use of formative assessment is even more critical to target adequate remedial support to learners following COVID-19 school closures.
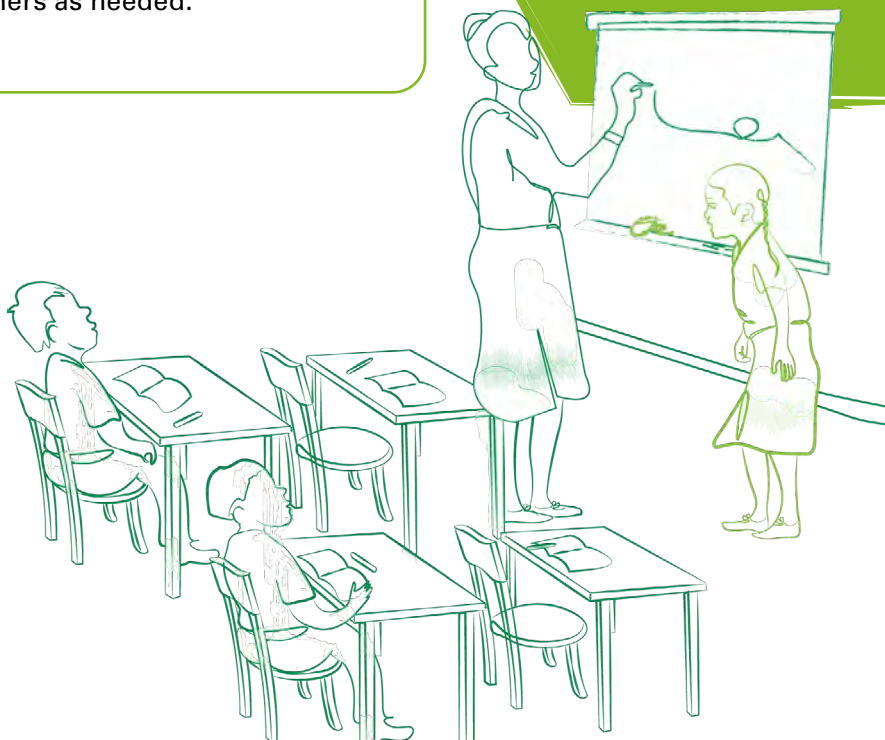
4 Building conducive school climate that is inclusive and safe for all children

Key challenges

Although students, teachers and school principals were generally positive about the school climate, there was a major concern about school-based violence and bullying among students, as well as conflict with teachers, including physical punishment. The importance of a positive school climate that promotes inclusion and student well-being is increasingly recognized as important for improving students' opportunities and choices in life, helping students flourish in their learning, diminishing the chances of dropout, building resilience against adversity, and preventing mental health issues (IIEP-UNESCO 2021b).

Recommendations

Continue monitoring student well-being through the Assessment of Student Learning Outcomes and promote the use of these data for planning. The mid-term review of the ESSDP 2021-2025 should explore the possibility of including a student well-being indicator in its monitoring and evaluation framework.

Consider measures that may improve school climate by reducing issues of school-based violence and classroom discipline. For example, introducing the social emotional learning approaches in schools, which have been shown to support students' academic results (Collaborative for Academic, Social, and Emotional Learning 2020) and reduce bullying and violence in schools and communities (Inter-agency Network for Education in Emergencies 2016). If such approach is selected, the capacity of teacher training colleges, DESBs/Provincial Education and Sports Services, VEDCs, school principals and teachers would need to be supported in its implementation.
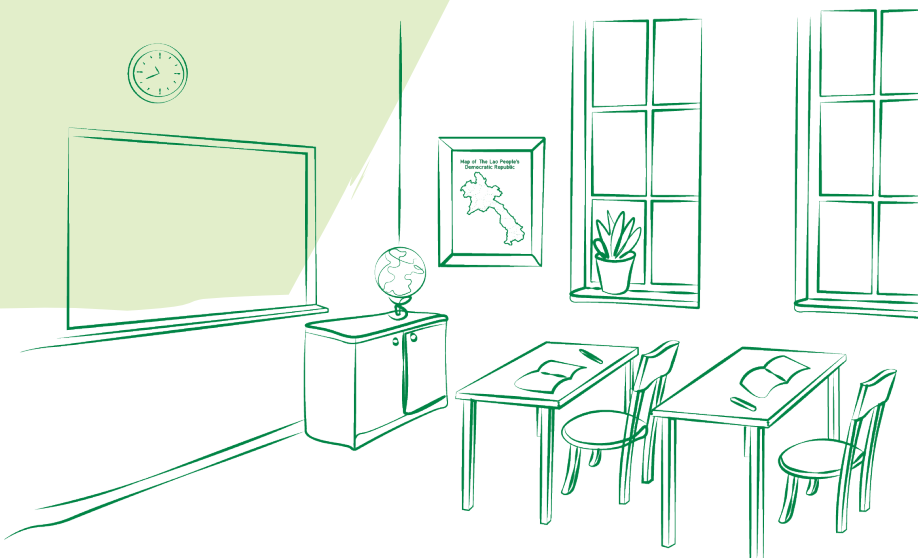
5 Improving school block grant implementation

Key challenges

Although the SBGs delivery process has been streamlined in recent years, there is room for improving its implementation. A few schools still report not receiving the full amount of the grant or experiencing delays. Less than half of the schools meet the 60 per cent minimum threshold for the priority spending activities.

Recommendations

Ensure adequate SBG documentation and its effective use among school staff. A key part of SBG implementation is documentation. It is crucial to train school staff in the effective use of SBG expenditure summaries and minutes from SBG-related meetings.

Consider revisiting some allowable spending categories of the SBG. Given widespread concerns about teacher capacity in the country, and feedback from the interviewed school principals, spending on teacher training could be included as an allowable activity for SBG spending. It is also necessary to explore why it is still difficult for schools to meet the 60 per cent minimum threshold for the priority spending activities, and to make appropriate revisions in the spending categories.

6 Strengthening mitigation measures and the resilience of the education system in light of the COVID-19 pandemic and future external shocks

Recommendations

Expand access to digital learning for students and improve relevant ICT infrastructure, especially in rural areas. The MoES should actively engage with development partners and the private sector to advance existing and new digital learning solutions, including Khang Panya Lao, as well as mobilize resources to improve the ICT infrastructure of schools in the country, with a focus on those in rural areas. The ICT skills of DESB and school-level actors should also be simultaneously strengthened.

Key challenges

Although most schools implemented some sort of remote learning activities, school staff indicated that they struggled to ensure effective learning continuity during COVID-19 school closures. Learning stopped for some students who lacked access to the necessary technologies or did not know how to use them for studying. Learning loss especially among low performing students, deteriorated financial conditions among families and teachers, and pressure on teachers to teach and finish the curriculum within a shorter period of time were all challenges. It is important to explore measures to strengthen the resilience of the education system and reduce the risks of future external shocks.

7 Establishing a school improvement support system engaging multiple education stakeholders

Continue to base resource allocations to schools more on needs, through both the use of FQS part 1, and trialling the use of the FQS school support categories. The consolidation of FQS data (parts 1, 2 and 3) in school support categories would support prioritization and targeting of support to schools. The MoES could trial a 'top-up' of the SBG using the school support categories and monitor its effect on school management, teaching and student outcomes.

Strengthen the roles of the VEDC in school management practices. The FQS-based primary school development guidelines highlight the important role of the VEDC in monitoring the implementation of the school development plan and SBG expenditure. The MoES should also consider expanding the VEDC's official mandate to include the monitoring of teacher absenteeism to support school improvement.

?! Key challenges

Improving student learning outcomes will rely on strengthening support systems for schools. The MoES has promoted using the FQS part 1 standards for developing district education-costed annual action plans. This is a crucial policy action aimed towards improving targeting of available funds through needs-based resource allocations to schools. Other education stakeholders, including VEDCs, also play a role in providing ongoing support for school improvement. Teacher absenteeism remains a challenge in Lao PDR and VEDCs play an essential role in monitoring teacher absenteeism, as well as the implementation of school development plans and SBG expenditure.

8 Leveraging insights from the Data Must Speak research to improve learning in Lao PDR

Key challenges

The DMS research has identified highly effective schools in Lao PDR and some of the practices and behaviours that contribute to their performance. From school management practices to teacher content knowledge and pedagogical practices, the research has generated important insights that can be leveraged to improve learning outcomes in the country.

Recommendations

Use participatory research to identify levers for optimally scaling practices and behaviours of highly effective schools to more schools in Lao PDR. Analysis of primary and secondary data sources can support identifying the concrete levers and incentives that exist at the system, policy, school and community levels that can support optimal scaling. This recommendation will be implemented in Stage 4 of the DMS research and will result in a co-created costed scaling plan that can be embedded within existing national strategies and support the MoES and relevant education actors with scaling efforts.

7. Appendices

Appendix A: Positive deviant school selection and quantitative research methodologies

A1. Population of interest

Based on discussions with DEQA, UNICEF Lao PDR and the UNICEF Innocenti DMS research team, it was decided that the quantitative school sample would include 120 public primary schools from eight provinces spread across the north, south and central regions of the country. The number of schools by province includes: Bokeo (9), Huaphan (15), Luang Prabang (12), Savannakhet (19), Champasek (24), Vientiane Capital (17), Vientiane Province (16) and Xiengkhouang (8). All schools included in the sample offer primary grades 1–5, and roughly 70 per cent are located in rural areas. Within the 120 schools, 40 are highly effective (positive deviant) schools, 40 are average effective schools and 40 are less effective (negative deviant) schools.

A2. Identifying positive and negative deviant schools

As briefly described in section 2.2, two sources of student assessment data were used to identify positive and negative deviant schools:

1. A learning assessment collected by DEQA in 119 public[13] schools in 18 provinces of Laos in late 2019. This was a multi-stage cluster sample. Within each province, two districts were selected, and then four schools were randomly chosen within each of the districts (two rural[14] schools and two urban schools). At each school, 10 students were randomly selected from grades 3, 4 and 5, for a total of 30 students per school who participated in the assessment. Students were assessed in the areas of Lao reading and writing and mathematics using a one-on-one assessment similar to the Early Grade Reading Assessment.

Student background questions were also included, in addition to school and teacher questionnaires.

2. The SEA-PLM data were collected at the end of the 2018/19 school year by the Research Institute for Educational Sciences (RIES). Grade 5 students were assessed in the areas of reading, writing and mathematics. Student background information was collected, in addition to questionnaires for student caregivers, teachers and principals. In total, 230 schools took part in SEA-PLM, but 30 private schools were excluded from the positive deviant school identification, leaving available data for 200 schools.

Identifying positive and negative deviant schools starts with a multivariate analysis of students' achievements using family background and school characteristics as control variables. The models are used to predict the test score of students conditionally on their family background and school characteristics. Positive deviant schools are schools where students' actual test scores are higher than what is predicted, whereas negative deviant schools are those where students perform lower than predicted.

Regarding student background information, it is desirable to control for multiple variables that are not directly influenced by the school, including the SES of the household, parental education levels, language and ethnicity, child work activities and home learning resources (books, computer access, etc.). However, controlling for school characteristics is more challenging, and, unlike the student-family background, more is not necessarily better. At a minimum, basic school controls should include location (urban/rural), school size and the school's average SES.

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[13] Data for the 125 private schools were excluded.
[14] Due to budget and time considerations, remote and inaccessible schools were not considered for inclusion in the DEQA sample.

Furthermore, basic measures of school inputs – like learning materials, resources and infrastructure – may also be included in order to identify students who have overcome school resource deficiencies, but there is a danger of 'over-identifying' the models by including variables that capture important teaching and school management practices and behaviours. Put differently, it is not advisable in the initial statistical modelling to capture the 'treatment' that the positive deviant students receive.

The results of the predictive models in Tables A1 and A2 are generally stable across the different specifications. For DEQA, the base model (1a–1b in Table A1) was added to with the control for school size (2a–2b) and finally the district fixed effects (3a–3b). For SEA-PLM, the base model (1) was expanded with school size (2) and the school average SES (3). There are some differences with and without the district fixed effects, but in general the main findings from the initial DEQA and SEA-PLM modelling are stable.

In addition to providing some insight into the student, family and school variables that predict student achievement, the purpose of the statistical analysis in this section is to aid the identification of positive and negative deviant schools. Results in Tables A1 and A2 show that there are meaningful variations in test scores, partially explained by these background factors. In both samples, the independent variables explain about one quarter of the variation between students, increasing to 38 per cent when district fixed effects are included. This also means that there is still a significant amount of unexplained variation in achievement between these students and schools. Following the positive deviant study design, the Stage 1 statistical analysis is intended to account for the variation related to family background and school characteristics, while the follow-up data collection and analysis focused more on classroom and school management processes and practices.

Table A1: Covariates of grades 3–5 public school student mathematics scores, 2019 Educational Standards and Quality Assurance Centre

Independent variables	(1) Student-family and location:		(2) Add school size:		(3) Add district fixed effects (FE):	
	(a) OLS	(b) HLM	(a) OLS	(b) HLM	(a) OLS	(b) HLM
Student and family characteristics						
Age	-0.01	-0.02	-0.01	-0.02	-0.01	-0.02
Female	0.28 **	0.27 **	0.28 **	0.26 **	0.27 **	0.26 **
Ethnic group (reference = Lao-Tai):						
Group 2	-0.53 **	-0.32 **	-0.58 **	-0.32 **	-0.37 **	-0.29 **
Group 3	-0.06	-0.22	-0.04	-0.21 **	-0.16 *	-0.23 **
Group 4	-0.09	-0.13	-0.01	-0.12	-0.28 *	-0.17 +
Grade of study (reference = grade 3):						
Grade 4	0.41**	0.41**	0.40**	0.41**	0.30**	0.41**
Grade 5	0.75**	0.74**	0.72**	0.74**	0.72**	0.74**

Independent variables	(1) Student-family and location:		(2) Add school size:		(3) Add district fixed effects (FE):	
	(a) OLS	(b) HLM	(a) OLS	(b) HLM	(a) OLS	(b) HLM
School characteristics:						
School location = urban	0.32**	0.32**	0.26**	0.28**	0.16	0.14
School percent Lao-Tai	0.35**	0.30*	0.35**	0.28*	0.49**	0.44**
Ratio of grade 5: grade 1	0.06	0.08	0.07	0.10	0.04	0.06
School enrolment	----	----	0.10**	0.09^+	0.10*	0.09
Constant (intercept)	-0.70*	-0.61	-0.93**	-0.72**	-0.67	-0.48*
District fixed effects?	No	No	No	No	Yes	Yes
Sample size (n)	3,302	3,302	3,302	3,302	3,302	3,302
Explained variance (R2)	0.23	----	0.24	----	0.38	----

Notes: Dependent variable is standardized (mean = 0, SD = 1.0). OLS refers to ordinary least squares, while HLM refers to a mixed model with random effects (intercepts) at school level.
* Significant at 0.05 level; ** significant at 0.01 level; + significant at 0.10 level

Table A2: Covariates of grade 3 public school student reading scores, 2019 SEA-PLM

Independent variables	(1) Student-family and location:		(2) Add school size:		(3) Add school average SES:	
	(a) OLS	(b) HLM	(a) OLS	(b) HLM	(a) OLS	(b) HLM
Student and family characteristics						
Age	0.006	-0.01	0.005	-0.01	0.01	0.003
Female	0.08**	0.10**	0.08**	0.10**	0.08**	0.10**
Number of siblings	-0.02**	-0.02	-0.02**	-0.02	-0.01^+	-0.01
Speaks Lao-Tai at home	0.30**	0.15**	0.29**	0.15**	0.25**	0.13**
Number of meals per day	0.01	0.02	0.01	0.02	0.02	0.03
Home resources (SES)	0.22**	0.15**	0.21**	0.15**	0.11**	0.12**
Parental engagement	0.11**	0.11**	0.12**	0.10**	0.11**	0.10**

Independent variables	(1) Student-family and location:		(2) Add school size:		(3) Add school average SES:	
	(a) OLS	(b) HLM	(a) OLS	(b) HLM	(a) OLS	(b) HLM
Highest parental education (reference=primary):						
Did not attend school	-0.05	-0.07	-0.05	-0.07	-0.03	-0.06
Lower secondary	0.12 **	0.04	0.12	0.04	0.10	0.04
Upper secondary	0.23 **	0.10	0.23	0.10	0.19	0.09+
University	0.27 **	0.17	0.27	0.17	0.23	0.16
Masters/PhD	0.47 **	0.23	0.44	0.22	0.39	0.22
School characteristics:						
School location = urban	0.06*	0.41	0.04	0.05	0.01	-0.02
School size (reference = 141–270):						
1–80 students	----	----	0.005	-0.08	0.09*	0.07
81–140 students	----	----	0.05	0.02	0.10**	0.09
271 + students	----	----	0.14**	0.13	0.11**	0.09
School average SES	----	----	----	----	0.29**	0.33**
Constant (intercept)	-1.04**	-0.68**	-1.08**	-0.71**	-1.15**	-0.80**
District fixed effects?	No	No	No	No	No	No
Sample size (n)	3,601	3,610	3,601	3,601	3,601	3,601
Explained variance (R^2)	0.22	----	0.22	----	0.23	----

Notes: Dependent variable is measured with five plausible values that are standardized (mean = 0, SD = 1.0). Sampling weights are based on replicate weight structure. OLS refers to ordinary least squares, while HLM refers to a mixed model with random effects (intercepts) at school level.
* Significant at 0.05 level; ** significant at 0.01 level; + significant at 0.10 level

## A3. Identifying the pool of positive and negative deviant schools

From a statistical point of view, the difference between the predicted test score of students and their actual test score is the error term of the model. To select positive and negative deviant schools, error terms have been averaged at the school level and extreme values have been selected. Separate regressions were run for reading, writing and mathematics, and the school average residual was calculated separately for each of the three subjects, by assessment. Then, an overall average residual across the three subjects was calculated for each school. This was done

separately for each of the three different models that are summarized in Tables A1 and A2. Overall, there is a high degree of correlation across the residuals based on study subject and model specification.[14] This makes it easier to decide which set of results to use for the final school selection since the school samples will not vary much based on the approach.

The 40 positive deviant schools have a standard error of 0.75 SD or more. For the negative deviant schools, it is not as simple as finding a cut-off point to identify the 40 schools, as there needs to be some flexibility to match the positive deviants with the negative deviants, so the cut-off point for negative deviant schools was set at ≤ -0.60. This generated 57 negative deviants in the eight selected provinces, which provides flexibility to find better matches. Finally, the average schools are then defined as those that have average residual greater than -0.60 SD and smaller than +0.70 SD. This group includes 67 schools. The final positive-negative-average sample population for the eight provinces is roughly 25 per cent positive deviant, 35 per cent negative deviant and 40 per cent average. This indicates the focus is not on extreme positive or negative deviant schools, which would be the case if selecting from the top or bottom 10 per cent of schools based on the residual.
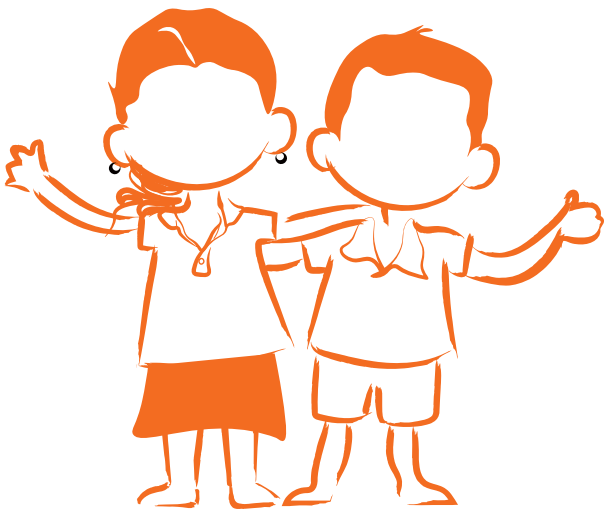
A4. Identifying comparison schools

Once the 40 positive deviant schools were identified, they were compared against the 57 negative deviants to find 40 negative deviant matches. This process was then repeated with the 67 average schools. Priority for matching was based on three variables: ethnicity (percentage Lao-Tai in school), location (urban/rural) and multigrade (yes/no). In the SEA-PLM data there is an indicator for SES quintile, which was allowed to vary by only one level (e.g., a quintile 4 school can be matched with a school from quintiles 3, 4 or 5). These matching criteria were strictly implemented, meaning that all rural positive deviants were matched with a rural negative deviant, positive deviants with 100 per cent Lao-Tai students were matched with negative deviants with at least 75 per cent Lao-Tai students, etc.

It was possible to match positive and negative deviants within the same district in a small number of cases, but priority was then given to matches within the same province. In sum, 27 out of 40 positive-negative deviant matches are within the same province, leaving 13 pairs that are 'cross-province' matched, and 29 out of 40 positive-average matches within the same province.

Table A3 provides a summary of sample balance across the three categories of schools. As expected, the highly effective schools have significantly higher student achievement results based on both the residual and assessment score measures. Overall, the three categories of schools have very different levels of performance on student assessments, but they are otherwise very similar based on measures of student and school background characteristics.

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[14]   The correlation between the reading and writing school average residual in the DEQA data was above 0.90, and these two subject residuals had a roughly 0.80 correlation with the mathematics residual. The correlation between the different average residuals based on all three subjects was above 0.90 for models 1 and 2 in Table A1, but the school average residual from model 3 with district fixed effects model had a lower correlation with the other school average residuals (about 0.65).

Table A3. Key outcome, strata and background indicators by school effectiveness category

Variables	Highly effective (40)	Less effective (40)	Average effective (40)
Student achievement measures:			
Average residual ('school value added')	1.26*	-1.18*	0.04
Average achievement (raw z-score)	0.68*	-0.67*	0.10
Other student outcomes:			
Average grade repetition rate	3.6	3.0	2.6
Average grade to grade pass rate	93.3	96.1	92.3
Female students (%)	46.3	46.2	44.3
Day of assessment attendance rate (%)	79.4	86.7	85.9
School strata and resources:			
Lao-Tai speakers (%)	78.5	70.0	80.0
Urban location (%)	25.0	27.5	35.0
Enrolment	172.9	134.2	141.5
Multigrade school (%)	37.5	37.5	37.5
SES factor	0.14	-0.16	0.11

Note: SES factor refers to school-level socioeconomic status (SES) factor that is formed as aggregations of students' socioeconomic status based on three parameters: the highest occupation of either parent, the highest educational level of either parent and the home resources of the children's family through the home resources scale.
* Category average is significantly different from overall sample average at $p < 0.05$ level

Table A4 provides a summary of the sample of participants selected for participation in the quantitative surveys.

Table A4. Summary of samples of students, teachers, school principals and VEDC members in 120 schools and DESB staff members in 33 DESB offices

Type of respondent	Number of respondents per school/DESB office	Selection details	Total number of respondents
Students	12 (minimum)	A minimum of 4 students (2 boys, 2 girls) in grades 3–5 were randomly selected per school	1,780
Teachers	3 (minimum)	With a focus on teachers in grades 3–5 when possible	361
School principals	1		120
VEDC members	3 (minimum)		333
DESB staff members	6–8		211

Appendix B: Qualitative research methodology

Table B1 summarizes the 12 schools that were visited during the qualitative fieldwork, with matched pairs of schools highlighted using different colour shading. The table also includes school characteristics for location, percentage of students who are Lao-Tai ethnicity, overall enrolment and multigrade status. Consistent with the overall sample design, these characteristics are generally very similar between the positive deviant and negative deviant schools for each matched pair, with only a few exceptions.

Table B1. Qualitative data collection matched schools

PROVINCE	DISTRICT	Effectiveness Category	Location	Lao-Tai (%)	Enrolment	Multigrade	Matched set
Huaphan	SamNeua	Negative (low)	Rural	68.9	136	No	Extra
	Huamueang	Positive (high)	Rural	45.8	98	Yes	1
		Negative (low)	Rural	42.8	62	Yes	1
	Quanh	Negative (low)	Rural	45.0	99	Yes	Extra
Champasak	Pakse	Positive (high)	Urban	100.0	186	No	2
	Phongthong	Negative (low)	Rural	92.9	109	No	3
	Soukkouma	Negative (low)	Rural	100.0	223	No	4
	Kong	Positive (high)	Rural	82.6	126	No	3
Vientiane City	Hatsayfong	Negative (low)	Urban	84.6	90	No	2
Vientiane Province	Thoulakom	Positive (high)	Rural	100.0	125	No	4
		Positive (high)	Rural	90.5	82	Yes	5
	Vang Vieng	Negative (low)	Rural	68.0	104	No	5

Table B2 provides a summary of the sample of participants selected for the qualitative interviews.

Table B2. Summary of samples of students, teachers, parents and school principals in 12 schools sampled for the qualitative data collection

Type of respondent	Number of respondents per school	Selection details	Total number of respondents
Students	18 (minimum)	One focus group discussion with boys and one with girls each for grades 3, 4 and 5; a minimum of 3 students per grade in each group	216
Teachers	3	Minimum 1 per grade (grades 3–5))	36
School principals	1		12
Parents	3		36

Appendix C: Comparisons of the Fundamental Quality Standards system to effective school categorization

The assignment of schools into high, average and less effectiveness categories for the DMS research is similar to the green (strong), yellow (adequate) and red (underperforming) categorization scheme used by DEQA in their FQS-based monitoring and support system.

The table below provides a summary of how the various indicators from the DMS research questionnaires align with the FQS part 1 and 2 standards.[16]

Table C1. Summary of FQS indicators mapped to DMS research questionnaires

FQS reference	Data collection source	Indicator description	Correlation with achievement	
			Overall average	Residual
FQS part 1 (infrastructure and human resources):				
FQS 1.2	EMIS	School has separate office	0.17	-0.04
FQS 1.4	EMIS	School has water	0.19	0.01
FQS 1.5	EMIS	School has separate toilets for boys and girls	0.19	-0.09
FQS 1.12	School Principal	Years of experience as principal in this school	0.03	-0.06
FQS 1.13	Teacher	Teacher has mid-level education or higher	0.02	0.01
FQS 1.14	Teacher	Number of students in classroom	0.26	0.16
FQS part 2 (processes):				
FQS 2.1	Teacher	School offers class every day of year	-0.06	-0.11
FQS 2.2	Teacher	School has no unauthorized teacher absences	-0.06	-0.11
FQS 2.3	Teacher	Teachers come late or leave early only in exceptional cases	0.14	0.09
FQS 2.4	Teacher	School keeps accurate and up-to-date records	0.14	0.09
FQS 2.5	Teacher	School has a current, costed SDP	-0.03	-0.01
FQS 2.6	SP	Classroom and school grounds are clean	0.16	0.04
FQS 2.7	SP	Water facilities and toilets are working and clean	0.03	-0.03
FQS 2.8	VEDC	All school-aged children in community are enrolled	0.18	0.10
FQS 2.9	Teacher	Teachers always prepare lesson plans	0.20	0.13
FQS 2.10	SP	Teachers cover the full curriculum over the school year	0.08	0.12
FQS 2.11	Teacher	Teachers have good knowledge in Lao/mathematics	0.40	0.30
FQS 2.12	Teacher	Teachers have good pedagogical skills	0.18	0.09
FQS 2.13	Teacher	Frequency teachers give feedback, corrects work, corrects homework and identifies areas to improve (overall scale)	0.29	0.17

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[16] The exact wording of the questions used in the DMS research data collection instruments is not always identical to the wording used in FQS.

FQS reference	Data collection source	Indicator description	Correlation with achievement	
			Overall average	Residual
FQS 2.14	Teacher	Teachers give extra support to students who need it	0.19	0.05
FQS 2.15	Teacher	Reporting assessment information to parents	0.34	0.18
FQS 2.16	Teacher	Teachers meet with parents of slow learners to discuss actions	0.16	0.11
FQS 2.17	Teacher	Teachers have a progress discussion with principal at least once per semester and receive feedback	0.07	-0.02
FQS 2.18	Teacher	Teachers collaborate to improve their teaching	0.19	0.11
FQS 2.19	SP	All students are polite and well-behaved	0.12	0.08
FQS 2.20	Teacher	Teachers collaborate and share knowledge/good practice with teachers from other cluster schools	0.10	0.01
FQS 2.21	Teacher	SP collaborates with colleagues in other cluster schools to improve teaching and learning	0.27	0.09
FQS 2.22	VEDC	Number of VEDC meetings per year	0.01	0.02
FQS 2.23	VEDC	VEDC monitors implementation of SDP	-0.10	-0.19

The correlation analysis on the right-hand side of this table summarizes the degree to which each indicator is associated with different measures of school effectiveness. The first column provides the correlation between each indicator and the school average student achievement level (from SEA-PLM or DEQA assessment scores), while the second column captures the correlation between the indicator and the achievement residual that was used to classify the schools into the relative effectiveness categories (see section 2.2 and Appendix A).

Table C2 below presents different summary indicators for the three school effectiveness categories. 'Global indicators' refer to all the indicators that were collected in the DMS research in Lao PDR (i.e., creating factors and indices using all of the data that were collected). 'FQS global averages' refer to all indicators from the DMS research that map onto a specific FQS (i.e., a reduced set of indicators compared to the global indicators). 'FQS best fit' refers to a sub-set of indicators that align with FQS and are most correlated with student achievement levels. 'Factor' refers to a kind of index that is produced by factor analysis that assigns weights to each indicator included in the factor. Finally, 'index' is a simple average of the indicators that are grouped together.

Table C2. Comparisons of performance indicator summaries by school effectiveness category using factor analysis

Summary indicator:	Overall average by sample category, (mean = 0, SD = 1.0)		
	Highly effective	**Average effective**	**Less effective**
Global indicators:			
Factor	0.26*	-0.03	-0.22+
Factor (best fit)	0.26*	-0.04	-0.22+
Index	0.26*	-0.02	-0.24
Index (best fit)	0.29*	-0.04	-0.25+
FQS global averages:			
Factor	0.29*	-0.11	-0.19*
Index	0.28+	-0.14	-0.14
FQS best fit:			
Factor	0.35*	-0.07	-0.28*
Index	0.36*	-0.09	-0.27*

* Category average is significantly different from other schools at p≤0.05 level
+ Category average is significantly different from other schools at p≤0.10 level

8. References

References

Azevedo, João P., et al., *Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A set of global estimates*, World Bank, Washington, D.C., 2020, <https://reliefweb.int/report/world/simulating-potential-impacts-covid-19-school-closures-schooling-and-learning-outcomes>.

Bergmann, Jessica, Maria Carolina Alban Conto, and Mathieu Brossard, *Increasing Women's Representation in School Leadership: A promising path towards improving learning*, UNICEF Innocenti, Florence, 2022, <www.unicef-irc.org/publications/1399-increasing-womens-representation-in-school-leadership-a-promising-path-towards-improving-learning.html>.

Brossard, Mathieu, et al., 'Parental Engagement in Children's Learning: Insights for Remote Learning Response During COVID-19', Innocenti Research Brief 2020-09, UNICEF Innocenti, Florence, 2020, <www.unicef-irc.org/publications/1091-parental-engagement-in-childrens-learning.html>.

Collaborative for Academic, Social, and Emotional Learning, *An Initial Guide to Leveraging the Power of Social and Emotional Learning*, CASEL, Chicago, 2020, <https://casel.s3.us-east-2.amazonaws.com/CASEL_Leveraging-SEL-as-You-Prepare-to-Reopen-and-Renew.pdf>.

Inter-agency Network for Education in Emergencies, *INEE Background Paper on Psychosocial Support and Social and Emotional Learning for Children and Youth in Emergency Settings*, INEE, New York, 2016, <https://resourcecentre.savethechildren.net/document/inee-background-paper-psychosocial-support-and-social-and-emotional-learning-children-and/>.

Lao People's Democratic Republic and United Nation's Children's Fund, *Lao Social Indicator Survey II 2017 (Multiple Indicator Survey/Demographic and Health Survey)*, UNICEF, New York, 2018, <www.unicef.org/laos/media/306/file/LSIS2017ENG.pdf>.

Ministry of Education and Sports, Lao People's Democratic Republic, ESDP 2016–2020: Mid-term review report, MoES, Vientiane, 2018, <https://planipolis.iiep.unesco.org/sites/default/files/ressources/lao_esdp_2016-2020_mid-term_review_report_eng.pdf>.

Ministry of Education and Sports, Lao People's Democratic Republic, *Education and Sports Sector Development Plan 2021–25*, MoES, Vientiane, 2020, <https://planipolis.iiep.unesco.org/sites/default/files/ressources/lao_pdr_education_and_sports_sector_development_plan_2021-2025.pdf>.

Ministry of Education and Sports, Lao People's Democratic Republic, 'Personnel Management Information System for 2022–2023' [data set], MoES, Vientiane, 2023.

Ministry of Education and Sports, Lao People's Democratic Republic, and United Nations Children's Fund, *Situational Analysis: Student learning outcomes in primary education in Lao PDR*, MoES and UNICEF, Vientiane and New York, 2015, <www.unicef.org/laos/media/331/file>.

Ministry of Education and Sports, Lao People's Democratic Republic, and United Nations *Children's Fund, Primary and Secondary Education Dropout Study: Findings from six districts in Lao PDR*, MoES and UNICEF, Vientiane and New York, 2023.

Ministry of Education and Sports, Lao People's Democratic Republic, and United Nations Children's Fund, *Positive Deviant Schools Study: Initial findings of quantitative analysis*, MoES, UNICEF Lao People's Democratic Republic, and UNICEF Innocenti, Vientiane and Florence, forthcoming in 2023.

National Commission for Mothers and Children, Lao Statistics Bureau, and United Nations Children's Fund Lao People's Democratic Republic, *Violence Against Children Survey in Lao PDR*, National Commission for Mothers and Children, Vientiane, 2019, <www.unicef.org/laos/media/2441/file/English.pdf>.

Organisation for Economic Co-operation and Development, *School Leadership for Learning: Insights from TALIS 2013*, OECD, Paris, 2016a, <https://read.oecd-ilibrary.org/education/school-leadership-for-learning_9789264258341-en#page1>.

Organisation for Economic Co-operation and Development, *TALIS 2018 Results (Volume I): Teachers and school leaders as lifelong learners*, OECD, Paris, 2019, <www.oecd-ilibrary.org/sites/1d0bc92a-en/index.html?itemId=/content/publication/1d0bc92a-en>.

Organisation for Economic Co-operation and Development, *What Makes a School a Learning Organisation? A guide for policy makers, school leaders and teachers*, OECD, Paris, 2016b, <www.oecd.org/education/school/school-learning-organisation.pdf>.

Schleicher, Andreas, *World Class: How to build a 21st-century school system*, OECD, Paris, 2018, <https://read.oecd-ilibrary.org/education/world-class_9789264300002-en#page1>.

United Nations Children's Fund and Southeast Asian Ministers of Education Organization, *SEA-PLM 2019 Main Regional Report: Children's learning in 6 Southeast Asian countries*, UNICEF and SEAMEO, Bangkok, 2020, <www.unicef.org/eap/media/7356/file/SEA-PLM%202019%20Main%20Regional%20Report.pdf>.

United Nations Educational, Scientific and Cultural Organization Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 'Promoting Learner Happiness and Well-being', UNESCO Asia-Pacific Education Thematic Brief, UNESCO, Bangkok, 2017, <https://unesdoc.unesco.org/ark:/48223/pf0000248948.locale=en>.

United Nations Educational, Scientific and Cultural Organization, *Behind the Numbers: Ending school violence and bullying*, UNESCO, Paris, 2019, <https://reliefweb.int/report/world/behind-numbers-ending-school-violence-and-bullying>.

United Nations Educational, Scientific and Cultural Organization, *School Violence and Bullying: Global status report*, UNESCO, Paris, 2017, <https://unesdoc.unesco.org/ark:/48223/pf0000246970>.

United Nations Educational, Scientific and Cultural Organization International Institute for Educational Planning, 'School Leadership', IIEP Learning Portal, UNESCO, Paris, 2021a, <https://learningportal.iiep.unesco.org/en/issue-briefs/improve-learning/school-leadership>, accessed 18 April 2023.

United Nations Educational, Scientific and Cultural Organization *International Institute for Educational Planning*, 'The Psychosocial School Environment', IIEP Learning Portal, UNESCO, Paris, 2021b, <https://learningportal.iiep.unesco.org/en/issue-briefs/improve-learning/the-psychosocial-school-environment>, accessed 18 April 2023.

Wodon, Quentin, et al., *Ending Violence in Schools: An investment case*, World Bank, Washington, D.C., 2021, <https://openknowledge.worldbank.org/entities/publication/be641349-d30c-5624-81df-9eacb753daea>.

World Bank, *Lao PDR Public Expenditure and Institutional Report (draft)*, World Bank, Washington, D.C., 2023.

World Bank, *Lao PDR: School autonomy and accountability. SABER country report*, World Bank, Washington, D.C., 2016, <https://openknowledge.worldbank.org/server/api/core/bitstreams/0303a346-8840-530c-9392-a3f03e37f8da/content>.

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