CHAPTER

6

Education

This chapter is part of the World Bank's 2020 Public Expenditure Review for Indonesia.

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Key Messages

- **A** Indonesia has undertaken several important reforms in the education sector over past two decades, including mandating that 20 percent of the budget be spent on education.
- **B** These additional resources for education have financed a significant expansion in student enrolment, especially at the secondary level, but quality is still lacking. Despite modest improvements in learning outcomes, Indonesia has a large learning gap between school attainment and learning (4.4 years of learning). Increases in the number of certified teachers have not led to significant improvements in student learning, as demonstrated by the PISA and by the National Exam (Ujian Nasional, or UN).
- **C** Resources for education are poorly distributed across subnational governments and levels of education. Early childhood education and development needs more attention.
- **D** Subnational governments, especially districts, account for the bulk of education spending, but differ in their fiscal and administrative capacity to manage education performance.
- **E** Despite the increase in resources, not all schools are adequately equipped to provide a conducive learning environment for students.

Summary of Recommendations

The GoI has recently implemented several new schemes to improve student learning: e-RKAS, BOS *Kinerja* and BOS *Afirmasi* to improve the use of resources by schools, a new teacher certification scheme (PPG), KIAT Guru to improve performance-based pay for teachers in remote areas, and greater coordination over the allocation of DAK *Fisik*. These measures need to be monitored and evaluated so that they can be scaled up if successful. In addition, the GoI needs to:

- **A** Strengthen coordination between the central and subnational governments, ensuring that districts have sufficient financial and institutional capacity to implement education policy;
- **B** Ensure that all Indonesian students have qualified teachers, e.g., by ensuring that contract and honorarium teachers have the necessary qualifications, clarifying the responsible party for teacher training and development, ensuring continuous professional development to improve teacher competencies, and monitoring the use of TPG funds allocated; and
- **C** Improve accountability by launching a National Education Quality Initiative, backed by the highest political levels, and by improving the collection/availability of education data.

Further key reading

World Bank. 2017. "World Development Report: Learning to Realize Education's Promise": www.worldbank.org/en/publication/wdr2018

World Bank. 2018. "Growing Smarter, Learning & Equitable Development in East Asia Pacific":

www.worldbank.org/en/region/eap/publication/growing-smarter-learning-equitable-development-in-east-asia-pacific

World Bank. 2018. "Indonesia Economic Quarterly June 2018: Learning more growing faster": www.worldbank.org/en/country/indonesia/publication/june-2018-indonesia-economic-quarterly

Promise of Education in Indonesia, Overview (English): http://documents.worldbank.org/curated/en/968281574095251918/pdf/Overview.pdf

Context

6.1

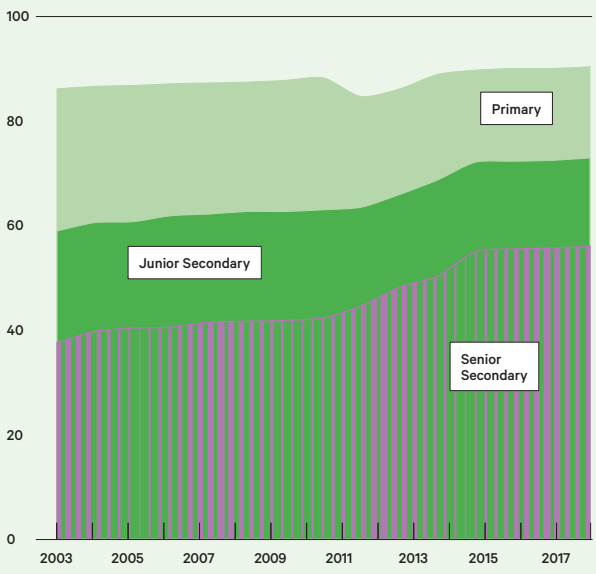
Over the past two decades, Indonesia's education system has undergone several major reforms. The main elements of these reforms, aligned with international best practice,[176] intended to: (i) increase the level of public spending on education by mandating an allocation of 20 percent of the budget to the sector;[177] (ii) improve teachers' quality by requiring them to have at least a Bachelor's degree (S1) and by introducing teachers' certification; (iii) strengthen the accountability system by improving the national test and promoting school-based management (SBM); and (iv) ensure that students are ready to learn in school by promoting early childhood education and development (ECED). Implementation of these reforms coincided with a national decentralization process which, while generating opportunities to bring decision-making closer to the users of education services, also created challenges in implementing these reforms, especially with regards to the issues of coordination and capacity.

These reforms have achieved an important expansion in education enrolment, but only a modest improvement in learning outcomes given the learning gaps. Over the period 2003-17, lower- and upper-secondary enrolment grew from 12.9 million to 19.8 million students, increasing the net enrolment rate from 63 to 78 percent, and from 50 to 60 percent, for lower- and upper-secondary, respectively (Figure 6.1). Encouragingly, more students from poorer families enrolled in school, as participation rates among students in the lowest income quintile almost doubled from 32 to 57 percent. In terms of quality, Indonesia was able to maintain on average its education results in the context of fast expansion of student enrolment described above. Between 2003 and 2018, Indonesian students' performance on the OECD Program for International Student Assessment (PISA) improved in math by 19 points, while it decreased in reading by 11 points. Results in science remained relatively stable at a 1 point increase (Figure 6.2). However, from its performance in 2015 compared with 2018, Indonesia scores decreased in Reading, Math, and Science by 26 points, 7 points, and 7 points, respectively. Indonesia's average score (382 points) trails OECD countries, whose average is 488. At the pace of improvement registered between 2003 and 2018, Indonesia will only reach math OECD PISA scores in 87 years and there will be no convergence in reading or science.

Growth in enrolment in a context of low learning outcomes is undermining Indonesia's potential. Adjusted for the quality of education, the expected years of education for an average Indonesian child can obtain by age 18 drops from 12.3 years to 7.9 years.[178] This learning gap of 4.4 years is among the highest in the world, which places Indonesia at a significant disadvantage, given that such a low quality of education affects the labor market outcomes of graduates and the country's overall competitiveness. Out of all new jobs created between 2008 and 2018, about 70 percent were in low value-added services sectors. Investing in the number of years of schooling is not enough; the importance of what students learn in school, and thus the knowledge and skills that they bring to labor markets, is a key determinant of future economic performance.[179] Given current investments in human capital, Indonesian children are expected to reach only 53 percent of their potential.[180] Such a situation cannot be allowed to go unaddressed.

FIGURE 6.1. Indonesia has made important gains in secondary enrolment...

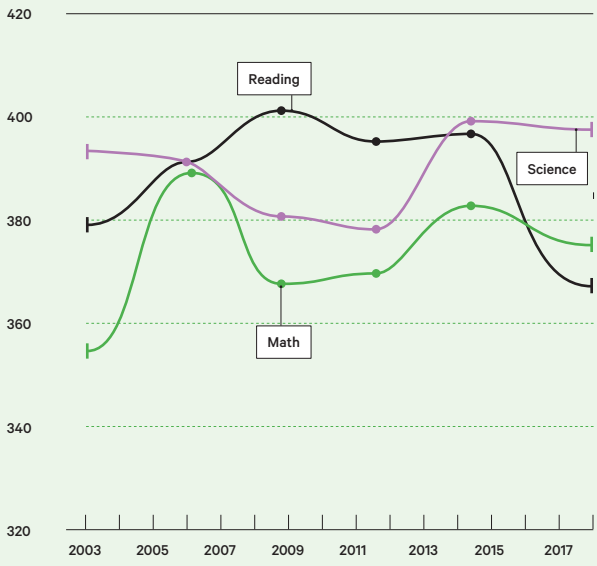
Net enrolment rates, percent



Source: World Bank staff calculations based on data from BPS (Statistics Indonesia).

FIGURE 6.2. ...but only modest improvements in learning outcomes

PISA score over time



Source: OECD PISA.

176 See World Bank (2018a) on the lessons from high-performing education systems.

177 Law No. 20/2003 on National Education and the Constitution Amendment III emphasize that all Indonesian citizens have the right to education, that the GoI has an obligation to finance basic education without charging fees, and that the GoI is mandated to allocate 20 percent of its expenditure on education.

178 The quality of education reflects harmonized test scores from major international student achievement testing programs into a common yardstick of learning

179 See for example, The Knowledge Capital of Nations (2015), where Hanushek and Woessman use the world's most comprehensive database of comparable test scores to propose that education quality best explains differences in regional and national economic growth rates since 1960. They provide careful and suggestive evidence in support of this thesis.

180 World Bank Human Capital Index, 2018.

To tackle the challenge of elevating Indonesia's human capital, the National Medium-Term Development Plan (RPJMN) 2015-2019 focused mainly on ensuring full enrolment in schools. The RPJMN's main objective was to ensure that all Indonesians complete 12 years of compulsory education. Available data show that, by 2018, progress had been achieved in increasing enrolment rates for most levels of education. Exceptions were in early years and higher education, which remained similar to the baseline. Net enrolment rates at the primary, lower-secondary and upper-secondary levels have increased since 2014, likely benefiting from the continuation of financial transfers to schools and to students, as well as the creation of new schools.

The RPJMN 2015-2019 also establishes a reform agenda to improve system efficiency, but progress on this agenda has been limited. In addition to the goal of achieving 12 years of compulsory education, the RPJMN includes more qualitative targets intended to improve overall efficiency of the education sector. While some of these targets (such as the improvement of the student assessment system) have been implemented, there has been little progress in other key areas, such as the (re-) distribution of teachers, expansion in the use of the national curriculum K13 (Curriculum 2013), and the establishment of links between education institutions and the private sector for vocational education. (See Annex 6.1 for a comprehensive list of the reform agenda.)

Despite these steps by the GoI to improve the efficiency and effectiveness of resources in the education sector, low capacity, poor coordination among stakeholders, inadequate information systems, and the lack of incentives to perform appear to be limiting their impact. As Indonesia moves forward, bolder policy actions are needed to ensure that the education sector meets its goal of providing high-quality education to all Indonesians. Elevating the country's human capital is essential to lift Indonesia's long-term growth, competitiveness and productivity. This chapter assesses to what extent the GoI's spending on education has contributed to this goal.

TABLE 6.1. Quantitative targets and progress of RPJMN 2015-2019[1/]

	RPJMN 2015-2019		Progress (based on Susenas)	
	Baseline	Target	2014	2018
1. Primary education				
a. Net enrolment rate	91.3	94.8	96.37	97.58
b. Gross enrolment rate	111	114.1	108.78	108.61
2. Lower-secondary education				
a. Net enrolment rate	79.4	82	77.43	78.84
b. Gross enrolment rate	101.6	106.9	88.43	91.52
3. Upper-secondary education				
a. Net enrolment rate	55.3	67.5	59.24	60.67
b. Gross enrolment rate	79.2	91.6	73.95	80.86
4. Early years education (3-6 yrs old[2/])	66.8	77.2	46.92	46
5. Higher education Gross enrolment rate	28.5	36.7	25.76	25.12

1/ All numbers refer to percent of eligible population (7-12 years for primary, 13-15 for lower secondary, 16-18 for upper secondary). Progress is calculated by World Bank staff based on Susenas household surveys. The methodology and precise data used to calculate RPJMN indicators may differ.
2/ Ever and currently enrolled.

Source: RPJMN 2015-2019 and Susenas (several years).

Is Indonesia Spending Enough *on* Education?

6.2

Indonesia is one of the biggest education spenders in the world if spending is measured as a share of total public expenditure, but it stands below its regional peers if spending is measured as a share of GDP. Indonesia's education spending as a share of the total government budget (20 percent) is about double that of advanced East Asian countries such as Japan (9.3 percent) and the Republic of Korea (12.8 percent), and on a par with Malaysia (21 percent) and Singapore (17.7 percent). However, as a share of GDP, Indonesia's education expenditure—at 3.0 percent of GDP—is about only half that of Malaysia and Vietnam, and lower than many other East Asian countries (Figure 6.3). This is in part due to relatively low levels of overall public expenditure in Indonesia that are constrained by low levels of government revenue (see Overview chapter).

General government spending on education has increased dramatically since 2001, driven by the 20 percent budget rule. The education budget for 2019 is IDR 491 trillion (about US$34 billion), a more-than-threefold increase in real terms since 2001 (Figure 6.4). This was mostly driven by the 2002 constitutional mandate requiring both central and subnational governments (SNGs) to allocate at least 20 percent of their budgets for education. Although this was only eventually implemented in 2009, overall education spending increased from 2.2 percent of GDP in 2001 to 3.5 percent (2015), moderating slightly to 3 percent of GDP in 2018. Resources to the education sector are expected to increase further, based on expected future budget expansion and overall economic growth.

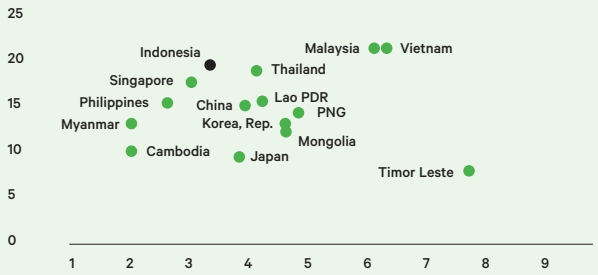
At the central level, there are three main ministries that spend on education. These are the Ministry of Religious Affairs (MoRA, at 12 percent of total spending on education), the Ministry of Education and Culture (MoEC, at 9 percent) and the Ministry of Research, Technology and Higher Education (MoRTHE, at 9 percent),[181] followed by other ministries at 5 percent, and other education users including education sovereign wealth funds (6 percent).

SNGs are responsible for the bulk of public education spending. In 2018, the central government only accounted for about 37 percent of total education spending, while the remaining 63 percent was allocated through transfers to SNGs (Figure 6.5). SNG spending on education comes mostly from central government trans-

181 The MoRA system covers 9.2 million students from pre-school to upper secondary school and 775,000 students in universities. The MoEC supervises the management of 'non-tertiary general education' by subnational governments, covering 53 million students in ECED to secondary education in public and private institutions. The MoRTHE operates tertiary general education, covering 2 million students in higher education institutions. The MoRA and the MoEC also supervise private schools, which serve 13.7 million children or about one-third of all students in basic and secondary education.

FIGURE 6.3. **Indonesia is one of the biggest spenders on education if looking at shares of the budget, but not if looking at shares of GDP**

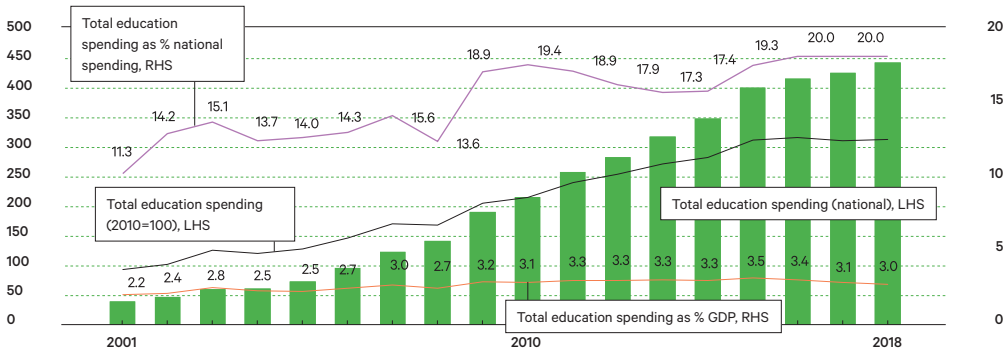
Y axis: Share of government expenditure, percent; X axis: Share of GDP, percent



Note: Latest year of data available between 2011 and 2015.
Source: EDSTATS and World Bank WDI, World Bank staff calculations.

FIGURE 6.4. **Public spending on education has increased significantly since 2001**

IDR trillion | Percent of GDP and spending

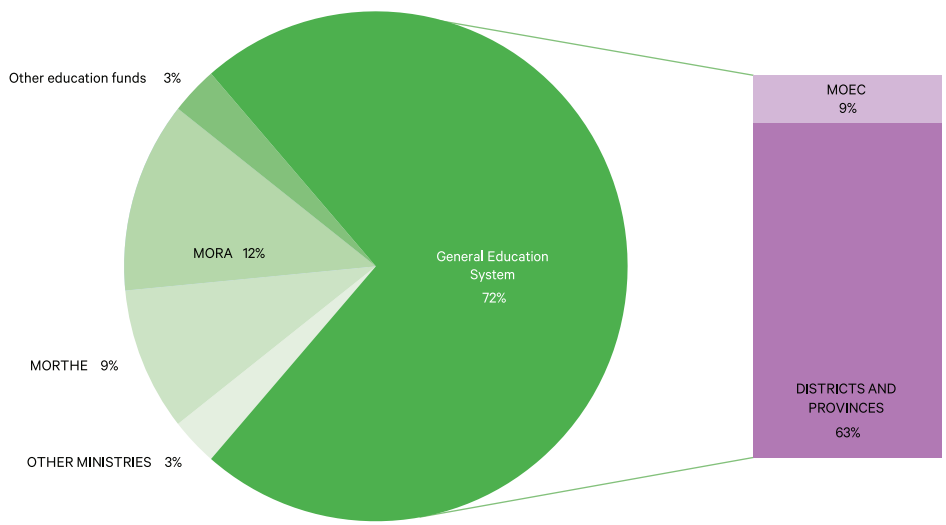


Note: Data refer to audited actual spending at the central government level from 2001 to 2017; 2018 refers to budgeted amount. Realized spending data at SNG level are available until 2014, so subsequent years utilized budgeted amounts. Realized spending data might not capture some SNG education spending if coded under the General Administration function (e.g., BOS, teacher salaries).

Source: World Bank COFIS database using MoF data and Presidential Regulation on budget details of respective years.

FIGURE 6.5. **SNGs account for 63 percent of total spending on education, 2018**

Percent of total



Source: World Bank COFIS database using MoF data.

fers for general use (*Dana Alokasi Umum*, DAU) and transfers with specific mandates (*Dana Alokasi Khusus*, DAK), in addition to some spending from own-source revenues. About 45 percent of DAU funds were used by SNGs to pay civil servant teacher salaries,[182] while the remainder was used for other local education expenses (including contract teachers). DAK funds are earmarked for funding school operational funds (*Bantuan Operasi Sekolah*, BOS), teacher professional allowances (*Tunjangan Profesi Guru*, TPG), and some school infrastructure. Figure 6.5 and Table 6.2 summarize the distribution of public funds for education at the central and SNG levels, while Box 6.1 describes some of the challenges in managing education in this decentralized context.

182 The DAU creates incentives for SNGs to overspend on personnel. See Intergovernmental Fiscal Transfers chapter.

TABLE 6.2. **Allocation of APBN toward education, 2014-19 (IDR trillion)**

	2014	2015	2016	2017	2018	2019	2020B
Central government allocation	**123**	**142**	**131**	**138**	**145**	**163**	**172**
MoEC (A)[a]	77	49	39	37	39	36	36
MoRTHE (C)[a]	0	39	37	37	42	40	41
MoRA (D)	40	45	45	51	50	52	55
Other ministries	7	9	11	13	13	26	23
Budget of State General Treasurer	0	0	0	0	0	9	17
Transfers to local governments (B)	**231**	**248**	**235**	**258**	**272**	**308**	**307**
DAU	138	137	142	147	153	169	167
DAK Fisik	10	9	2	7	9	17	19
DAK Non-Fisik	79	97	86	99	105	118	117
Special Autonomy	4	4	5	5	5	5	4
Revenue Sharing Fund	138	137	142	147	153	169	167
National Education Development Fund	**0**	**0**	**5**	**11**	**15**	**21**	**29**
TOTAL	**353**	**390**	**371**	**406**	**432**	**492**	**508**

Note: The MoEC and the MoRTHE were created in 2015. Values for 2014 are estimated based on total allocation to the MoEC in that year, based on relative budgets in 2015. 2020 refers to budgeted spending.

Source: Presidential Regulation No. 107/2017 on the education budget details for 2018.

BOX 6.1. **The challenges of managing education in a decentralized context**

Education is the joint responsibility of the central government, SNGs and schools in Indonesia; hence, the overall efficiency and effectiveness of education results respond to the combined results of their actions. According to the Law on Decentralization, local governments are responsible for managing schools, while the central government is responsible for managing teachers and providing overall quality assurance. School committees take decisions at the school level. The roles and responsibilities of school committees in planning and monitoring education service delivery are governed under the Law on Education, while the roles of local governments are governed under the Law on Decentralization, particularly regarding the implementation of the minimum service standards (MSS).

The central government supports the education system through the quality assurance mechanism of the MoEC, as well as through earmarked transfers. The central government has been strengthening its quality assurance role by starting to monitor the implementation of National Education Standards, improving the reliability of the testing system, and improving the quality of the data. Moreover, through earmarked transfers, the central government supports the teacher professional allowance (TPG), school operational funds (BOS) through DAK *Non-Fisik*, and resources for improvements in infrastructure (DAK *Fisik*).

Different amount of resources to invest in education generate different opportunities for different SNGs. Provinces that have more than 2 million students have discretionary education resources of about IDR 1 million per student, while provinces that have less than 1 million students have discretionary education resources of about IDR 4 million per student (World Bank, 2018). These different discretionary resources limit the capacity of local governments to invest in improving teachers' content mastery and pedagogical practice.

The effectiveness and efficiency of education spending is also affected by rigidities in spending decisions and limited local institutional capacity. The payment of civil service salaries absorbs a significant share of SNG budgets. Conservative estimates indicate that they allocate IDR 65.9 trillion to pay civil servant teacher salaries,[b] equivalent to 43 percent of education resources from DAU.[c] With the remaining resources, each SNG decides how to invest in education, i.e., by hiring contract teachers, supporting school operation costs, supporting teacher training groups, and investing in school infrastructure, among others. Moreover, decisions that involve civil service teachers are mostly taken at the central level, with little involvement of the local governments that manage them day-to-day.

TABLE 6.3.

Teacher hiring authority

Type of contract	Hiring authority
Civil servant	Ministry of State Apparatus (under MoEC guidelines)
Contract teachers	Districts and provinces
Honorarium teachers	Schools

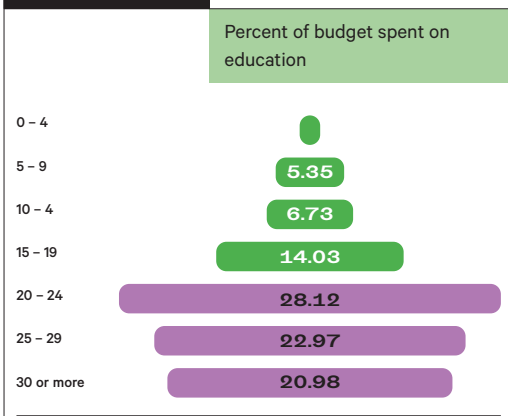
Source: Law No. 14/2005 on Teachers, Law No. 5/2014 of the civil Apparatus, and Government Regulation No. 56/2012

Note a): Major participation of the provincial government in the sector started in 2014. Law No. 23/2014 shifted the responsibility to manage upper secondary schools from the districts to the provinces, including this government level in the education sector.
Note b): Based on the total number of civil servant teachers (1.7 million), and an average teacher salary of IDR 2.7 million (including the 14th month payment).
Note c): Estimates of national education expenditure indicate that 40 percent of DAU is spent on education.
Source: Authors.

Most districts and provinces claim to meet the 20 percent allocation requirement for education, but there are important differences among them. In 2017, 72 percent of the districts for which data were available spent more than 20 percent of their budget on education (Figure 6.6). A further 20 percent of districts spent more than 30 percent of their budget on education, and 2 percent of districts spend more than 40 percent. However, compliance is noticeably lower for provinces: only 38 percent of provinces fulfill the constitutional mandate. In 13 percent of provinces, the budget allocation for education is less than 10 percent (Figure 6.7).

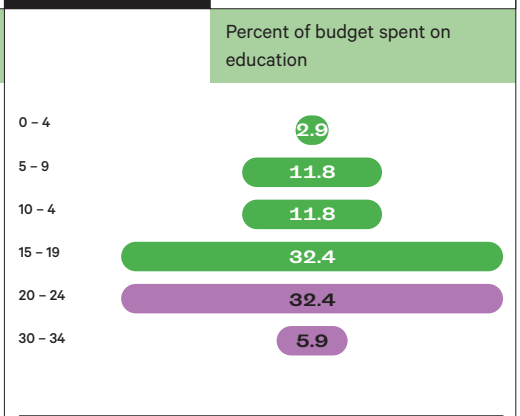
Despite rising public resources to the education sector, household private (out-of-pocket) spending on education has also increased significantly in recent years. The contribution of household expenditure to total education expenditure (public and private household) increased from 34 percent in 2009 to 44 percent in 2015. This out-of-pocket education spending is costly, especially for poor households. Sending only one child to a primary school could absorb about 7 percent of total household expenditure. It would also be excessively expensive for a poor household to send a child to upper-secondary school, as it could consume about 24 percent of total household expenditure.

FIGURE 6.6. Most districts spend more than 20 percent of their budget on education...



Note: Data available for 505/514 districts.
Source: World Bank staff calculations using data from MoF DJPK.

FIGURE 6.7. ...while only 38 percent of provinces meet this requirement



Note: Data available for 33/34 provinces.
Source: World Bank staff calculations using data from MoF DJPK.

Is Indonesia Spending Efficiently & Effectively *on* Education?

6.3

A *Efficiency: Has education spending been optimally allocated across schools and localities, and led to an increase in outputs in the sector?*

B *Effectiveness of education spending: Are students learning in school?*

A *Efficiency:* *Has education spending been optimally allocated across schools and localities, and led to an increase in outputs in the sector?*

The increase in public education spending over the past decade has financed an expansion in school enrolment, in line with the GoI's objective as stated in the RPJMN 2015-2019. Available data for the general education system shows an important improvement in enrolment across provinces in Indonesia, particularly for upper-secondary education. Between the 2014/15 and 2017/18 school years, the enrolment rate grew by 13 percentage points (pp) for regular upper secondary (SMA), and by 16 pp for vocational education (SMK). Total enrolment grew by 2 pp, explained by the expansion in enrolment in private schools (11 pp), as the enrolment in public schools decreased slightly (0.4 pp) (Table 6.4). During the same period, the education budget grew by 10 percent in nominal terms and 3.5 percent in real terms. As a result, expenditure per pupil in the general education system has increased by 8 percent in nominal terms and 1.5 percent in real terms.

However, the allocation of education resources across levels of education may be suboptimal, as spending on early childhood education and development (ECED) is clearly lagging the needed investments in Indonesia's children.[183] Although the current structure of education financial data does not allow the full disaggregation of spending by education level, the current mechanism to distribute resources and high enrolment rates indicates adequate distribution of resources among primary, lower-secondary and upper-secondary education. In contrast, existing information shows that ECED is clearly a low priority. For example, the Directorate General of Early Childhood Education only receives 4.5 percent of the MoEC's budget, or about IDR 1.8 trillion. In addition, although the GoI provided grants to ECED centers (*Bantuan Operasional Penyelenggaraan Pendidikan Usia Dini*, or *BOP PAUD*) similar to BOS transfers for primary and secondary education since 2016, only IDR 4.4 trillion was allocated for this purpose in 2019 (compared with IDR 51.2 trillion for total BOS). The low allocation to *BOP PAUD* responds to the low enrolment at that level, responding to the low demand and lack of supply. Low demand for ECED is mostly due to a lack of awareness of the importance of ECED to overall child development and future well-being. Lack of availability of a nearby ECED center also contributes to parental decisions to send (or not send) their children to an ECED center. The future expansion of ECED and resources allocated to that level will depend

TABLE 6.4. Change in student enrolment by education level between the academic years 2014/15 and 2017/18 (Percentage point change)

	Elementary (SD)	Lower secondary (SMP)	Upper secondary (SMA)	Vocational upper secondary (SMK)	Total
Total	-2%	2%	13%	16%	2%
Public school	-4%	2%	11%	21%	-0.4%
Private school	11%	2%	16%	13%	11%

Source: MoEC.

183 International evidence (Carneiro et al. 2003; World Bank, 2018) strongly suggests expanding access to quality ECED services gives the highest return on investment in education, as these are the most important years of a child's cognitive development that influence his/her future health and productivity.

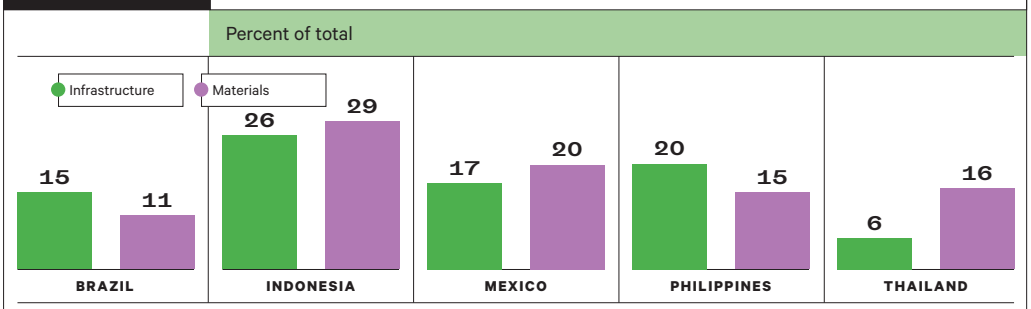
on higher demand from families for those services and, at the same time, the support from the central, district and village governments, which would translate the demand into an expansion of ECED services. Based on Law No. 23/2014 on Decentralization, the management of ECED is the responsibility of district governments. Given the financing on a per student basis, the overall amount allocated for ECED will increase as the number of students also increases.

Despite increases in spending, many schools still lack basic elements to support student learning. Among the participants in PISA tests, Indonesian school principals are more likely to indicate a shortage of infrastructure and materials in their schools. For example, 29 percent of Indonesian school principals indicate a major shortage of materials. This is a much higher percentage than for Mexican (20 percent), Thai (16 percent), Philippines (14 percent) and Brazilian (10 percent) (Figure 6.8).

Administrative data from the MoEC confirm these challenges. The data indicate that only 25 percent of the classrooms in basic education and 40 percent of classrooms in upper secondary are in good condition (Table 6.5). Only 21 percent of the schools in basic education are accredited with a level 'A', and schools attended by poor students have a lower proportion of classrooms in good condition and are less likely to be A-accredited (Table 6.5). The differences in the characteristics of schools catering to the poor and the non-poor increase as students reach upper-secondary school.

Part of the problem lies in the uneven distribution of transfers from central government to SNGs, creating significant heterogeneity in SNGs' ability to manage education spending. Currently, DAU transfers are not allocated based on a per capita basis, and some components of the DAU come in the form of a block grant of the same amount to all the districts regardless of the district's population (see Intergovernmental Fiscal Transfers chapter). This approach, along with variations in the number of students across districts and provinces, creates significant variation in terms of allocation of resources per student and therefore affects the resources available for service delivery. For example, the province of West Java receives about IDR 29 trillion, or IDR 4.4 million per student, while West Papua receives IDR 3 trillion, or IDR 19 million per student (Figure 6.9). These differences may account for differences in the costs of providing education services across regions, but the more than six-fold variation suggests that the allocation of these transfers is not aligned with education needs.

FIGURE 6.8. Share of principals reporting shortage of education inputs (selected countries)



Note: Share of principals that indicated "a lot" as asked on the shortage of selected education inputs.

Source: PISA 2015 (OECD, 2016).

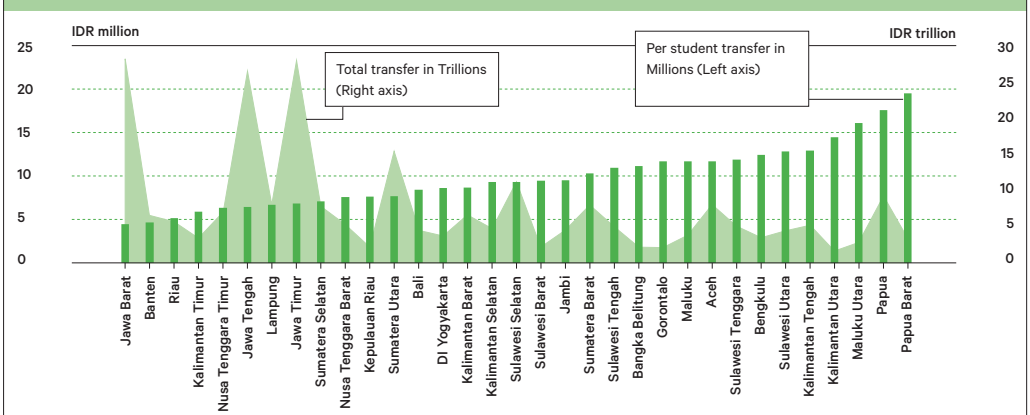
TABLE 6.5. School characteristics by socioeconomic conditions

	Basic Education			Upper secondary & vocational education		
Indicator	Top quintile	Bottom quintile	Total average	Top quintile	Bottom quintile	Average
Good classrooms (%)	36	19	25	52	31	40
Teacher with Bachelor's degree (%)	86	84	86	94	93	94
Student–teacher ratio	19	15	17	19	14	17
Schools with "A" Accreditation (%)	35	13	21	55	14	34

Note: School socioeconomic condition is estimated by the number of students eligible for PIP (Program Indonesia Pintar, cash transfer program for poor students).

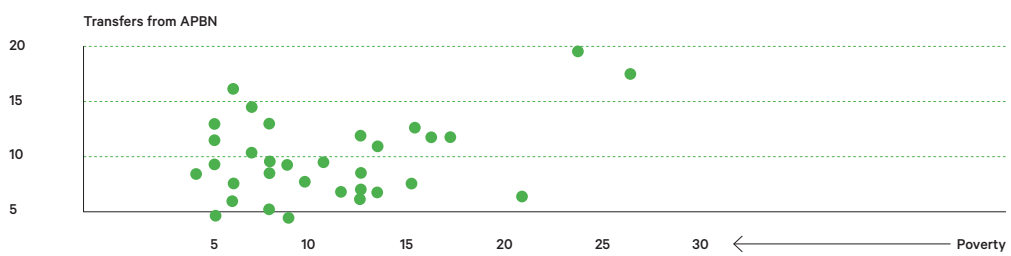
Source: World Bank estimates using Dapodik.

FIGURE 6.9. The allocation of transfers per student varies across provinces and districts



Source: World Bank staff estimates based on SIMTRADA and Susenas (2018).

FIGURE 6.10. Transfers per student are weakly related to poverty rates



Source: World Bank staff estimates based on SIMTRADA and Susenas (2018).

FIGURE 6.11. **Allocation of DAK *Fisik* transfers is only weakly related to infrastructure needs, comparing damaged classrooms in 2016 with DAK Fisik allocations in 2017**

Source: MoF and MoEC data, World Bank staff calculations.

Moreover, per student education transfers are not targeted to poorer districts, and hence do not promote resource equity in the education system. Even though the two provinces (Papua and West Papua) with highest poverty rates receive the largest transfers per student, there is no clear positive or negative correlation for the other provinces in Indonesia (Figure 6.10).

Similarly, specific purpose transfers from the central to SNGs are not always distributed according to infrastructure need. The central government supports the development of infrastructure for the education sector through DAK *Fisik*. These grants are supposed to be used for school rehabilitation and additional classroom construction. However, analysis of the resources allocated through DAK *Fisik* for school infrastructure in 2017 showed only a weakly positive relationship between resources allocated and the needs of districts (Figure 6.11). This is especially the case for primary and lower-secondary schools, while the relationship becomes stronger for upper-secondary schools.

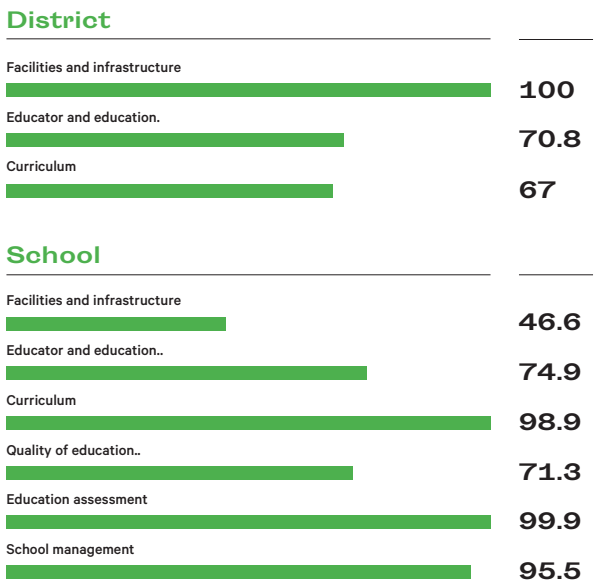
Moreover, differences in district capacity to manage education may explain why so many schools are not conducive to learning. At both the district and the school level, there are minimum service standards (MSS) for facilities and infrastructure (for the primary and lower-secondary levels),[184] education personnel, and the curriculum. All districts in Indonesia fulfill the MSS for facilities, which mandates the existence of a school in all geographical areas. However, only 70 percent of districts fulfill the MSS on education personnel, and only 67 percent of districts fulfill the MSS related to curriculum implementation (Figure 6.12). Less populated districts, which tend to receive more transfers per capita, have more challenges in fulfilling both district-level and school-level MSS. This is likely because less-populated districts tend to be less capable at managing the education system (Figure 6.13).[185]

184 The MSS describes the minimum quality and quantity of education services that should be delivered by district/city education services and district-level offices of the MoRA, as well as services that are the responsibility of individual schools to deliver. According to Permendikbud No. 23/2013, there are 27 MSS indicators for education, divided into district level and school level. At the *district level* these are: (i) access and infrastructure, (ii) provision of teachers, (iii) teacher/principal qualifications, and (iv) district quality assurance and management. At the *school level* these are: (i) resources for learning, (ii) teaching processes, (iii) school quality assurance and management. However, the regulation has been recently revised with Permendikbud No. 32/2018, which defines only two categories of MSS: 1. Standards for basic learning resources (textbooks and stationaries) and 2. Standards for number of teachers and education personnel and their basic competencies.

185 Al-Samarrai et al. (2013) construct a measure of local education governance by assessing transparency and accountability, education service provision standards, management of control systems/information systems, and efficient use of resources.

FIGURE 6.12. **Most districts do not fulfill all the MSS, with larger gaps in facilities and infrastructure MSS at the school level, signaling poor school conditions**

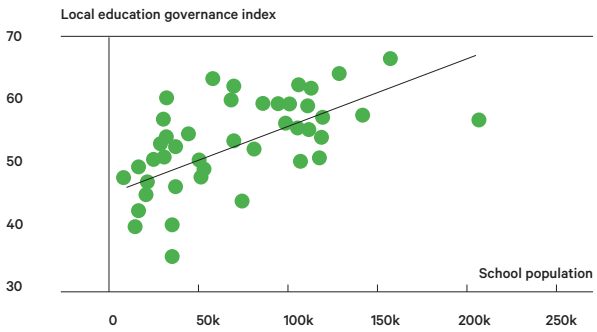
Percent of districts, or schools



Source: MSS monitoring system (http://spm.dikdasmen.kemdikbud.go.id/)

FIGURE 6.13. **Smaller districts tend to have low capacity to manage the education system**

Y-axis: Local education governance index; X-axis: School population



Note: Possible scores for the ILEG index range from 0 to 100. No schools received scores higher than 75. Scores below 45 are classified as low performance, 45-60 as average performance, and above 60 percent as high performance.

Source: Al-Samarrai et al. (2013) and Dapodik.

The capacity to manage resources received from the GoI is also lacking at the school level. The central government provides resources to all schools through BOS transfers so that they are able to support basic operations. Established in 2005, BOS transfers amounted to IDR 51 trillion in 2019, double the amount of resources allocated in 2014. The increase is due to the expansion in the number of students (Table 6.4) and the increase in the benefit level.[186] BOS resources should be used by schools to achieve the MSS and the National Education Standards (NES).[187] In practice, however, there is little knowledge at the school level of the NES and MSS, and schools do not prioritize their achievement of these standards as they prepare plans on BOS use. BOS transfers are mainly used to finance operational costs such as utility bills, security, and to pay honorarium teachers.

186 On a per student basis, BOS per student allocation increased between 2015 and 2018 from IDR 235,000 to IDR 800,000 for primary school, from IDR 324,500 to IDR 1,000,000 for lower-secondary school, and from IDR 1,000,000 to IDR 1,400,000 for upper-secondary school.

187 National Education Standards (NES) was established based on the Law No. 20/2003 on the National Education System and was followed up by Government Regulation No. 19/2005. NES is defined as the national standard to be achieved in education sector in the eight areas: content, process, graduate competency, teacher standards, school facilities, education management, funding, and assessment. Details of NES can be found in Annex 6.1.

B

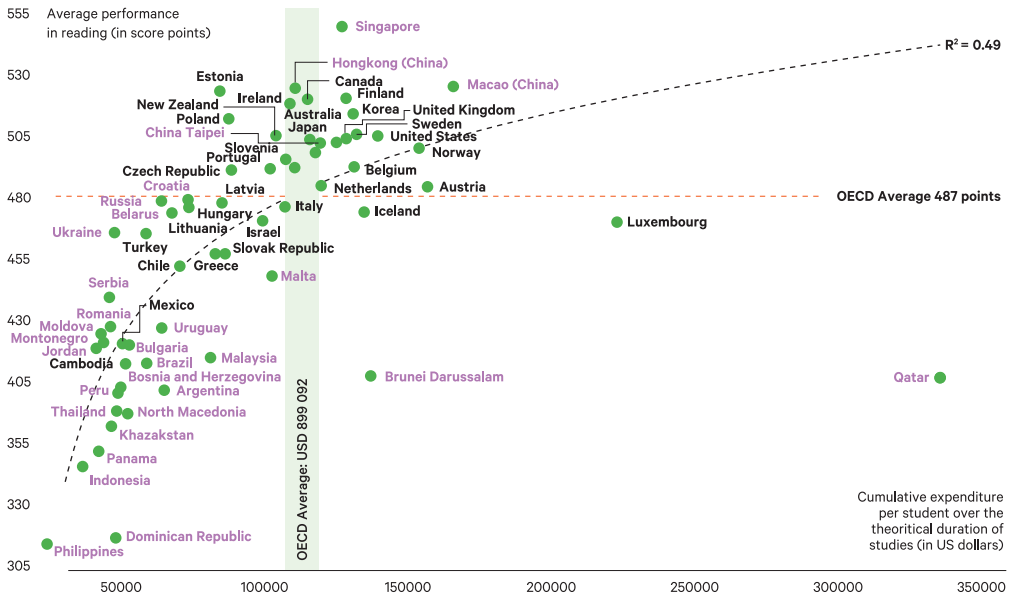
Effectiveness of education spending:

Are students learning in school?

Increases in spending on education have financed an increase in certified teachers. Between 2003 and 2015, the number of teachers grew by 30 percent, while the number of students increased by 25 percent, leading to decreases in student-teacher ratios. Many of these teachers met the requirements of the Teacher Law to have a university degree and obtain certification. Certified teachers who fulfilled these minimum requirements became entitled to an allowance (TPG) on top of their basic salaries. TPG now accounts for nearly 12 percent of the total education budget, and the share of teachers with at least a bachelor's degree increased from 37 percent in 2003 to 90 percent in 2016.

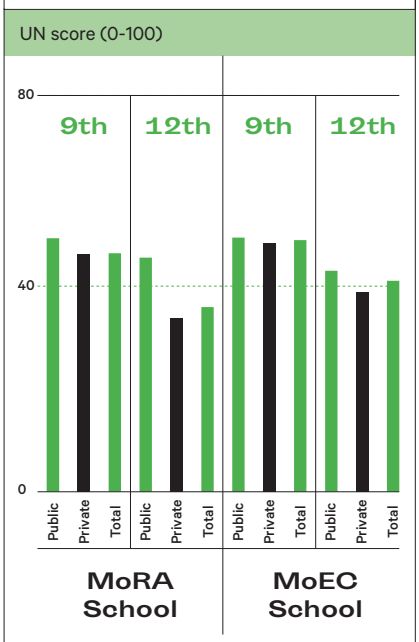
However, the increase in teacher certification has not been accompanied by a significant improvement in teacher quality. On average, teachers scored 53 out of 100 points on a 2015 MoEC study, with little difference between certified and non-certified teachers. A video study found that teachers in Indonesia lack basic pedagogical competencies: Indonesian teachers rarely pose strategic and open-ended questions that require complex and specific student responses that would demonstrate student understanding. The video study showed that close to 90 percent of the students observed responded to teacher questions using only a single word—a consequence of teachers employing weak pedagogical practices (Ragatz et al., 2015). Furthermore, an impact evaluation by de Ree et al., 2017, shows that TPG had no impact on student learning outcomes (as measured through test scores). Teacher welfare, however, has improved, as shown by the reduction in the number of teachers with a

FIGURE 6.14. PISA scores tend to improve with rising expenditure per student, several countries do better than Indonesia despite spending a similar amount of cumulative expenditure per student



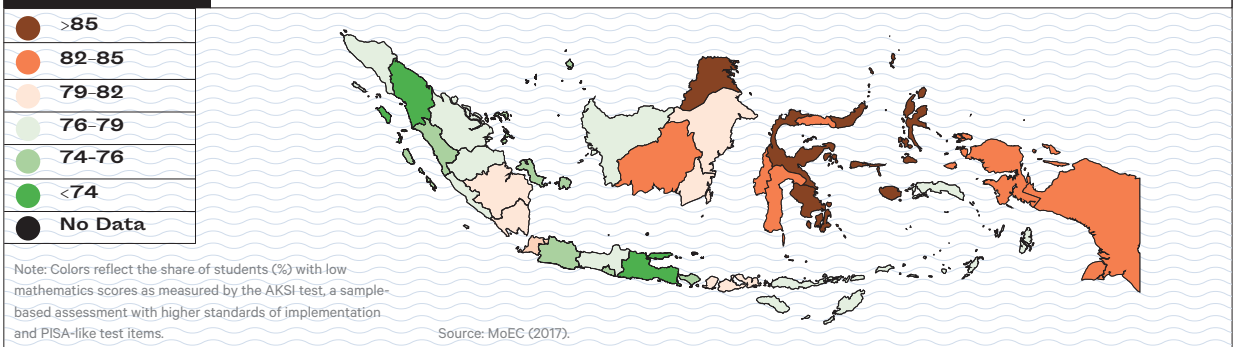
Source: OECD, 2019.

FIGURE 6.15. National exam for grade 9 and 12 for MoEC and MoRA schools (public and private)



Source: World Bank staff calculations using Puspendik data 2016-18.

FIGURE 6.16. The AKSI test indicates that eastern provinces tend to have higher shares of low-performing students



Note: Colors reflect the share of students (%) with low mathematics scores as measured by the AKSI test, a sample-based assessment with higher standards of implementation and PISA-like test items.

Source: MoEC (2017).

second job. These results are aligned with Chang et al. (2014).

Poor student learning outcomes and inefficient spending on education are particularly evident when comparing Indonesia's scores on the PISA test with other countries. Although evidence from PISA shows that, at least for low levels of education spending, higher per student public education spending is associated with better PISA scores (Figure 6.14), Indonesia's PISA scores are much lower than several countries (such as Ukraine, Serbia, Romania), despite having a similar level of education spending per student.

National assessments also demonstrate that Indonesian students are not learning enough, with private schools performing worse than public schools. The national exam, Ujian Nasional (UN), is conducted annually for grade 9 and grade 12 at all public and private schools under the MoEC and the MoRA that follow the national curriculum. UN serves as one of the tools to measure education quality at the national level. The average UN scores for MoEC schools are slightly higher than MoRA schools, especially at upper-secondary level, but scores are low overall, averaging 44 points out of 100 for public schools (Figure 6.15). Private schools score even lower than public schools regardless of whether they are in the MoEC or MoRA system, averaging 37 points out of 100. This discrepancy has been increasing with the introduction of computer-based assessments in recent years, which have reduced the possibility of cheating during the test. The GoI should focus on this low level of learning in their efforts to improve the quality of education, including in private providers who play a major role in forming Indonesia's human capital.

Learning differences are also pronounced across regions. The results of the Indonesia National Assessment Program (*Asesmen Kompetensi Siswa Indonesia*, AKSI)—a sample-based assessment with high standards of implementation and contents that are similar to the PISA—show that provinces with higher shares of low-performing students are mostly located in eastern Indonesia. This is the case for mathematics (Figure 6.16), reading and science assessments. Moreover, there is a negative correlation between fiscal transfers per student and AKSI scores. Even though the GoI directs more resources to lagging areas to compensate for difficulties in these areas, this result suggest that eastern provinces have low capacity to implement education policy.

Recommendations to Improve the Quality of Spending

- A *Strengthen coordination with SNGs & their capacity to implement education policy*
- B *Ensure that students are taught by high-quality teachers*
- C *Improve M&E to increase accountability for the education sector*

6.5

BOX 6.1.

The challenges of managing education in a decentralized context

Existing international evidence shows that, if designed correctly, incentives can affect the performances of the actors in the education sector. However, key elements need to be clarified for this incentive mechanism to work:

1. Who is eligible to participate;
2. Performance measures (will need to be observable, objective, attributable, and verifiable);
3. How and when the performance will be assessed; and
4. What rewards will be received.

International evidence, for example from Chile's *Sistema Nacional de Evaluación del Desempeño* (SNED) also suggests that the design of a performance-based incentive should include both the level of achievement and improvement in the incentive formula. If only achievement is used, it is expected that many teachers and school directors from poor performing schools will not increase their effort, as they will feel that they are unlikely to win; and, if schools are sure they will win, they are also not likely to increase their efforts. If only improvement is used, there is a risk that schools with low absolute levels of achievement will win. An evaluation of the initial introduction of BOS *Kinerja* should be performed to ensure that adjustments are done as needed.

Jakarta has implemented a similar program to incentivize better performance in education. An evaluation (Al Samarrai et al., 2017) finds that the introduction of the performance component had different impacts on government primary and lower-secondary schools. The program improved learning outcomes for primary schools at the bottom of the performance distribution and narrowed performance gaps across schools. However, improvements in equity were also driven by negative impacts of the program on better performing primary schools. Overall, the program reduced primary examination scores, albeit by a small amount. In contrast to the results at the primary level, the performance component improved examination scores in government lower-secondary schools. However, the impact seemed to be greatest among better performing schools and has therefore widened performance gaps. The findings also suggest that program impact was largely achieved through competition between schools to receive the performance component.

Source: Authors

The GoI has recently implemented several promising initiatives that aim to improve student learning outcomes.

FIRST, the MoEC is trying to improve the management of resources at the school level through the following initiatives, in some cases with the support of the district or provincial office:

- **E-RKAS** Following the successful implementation in Surabaya and Jakarta, the MoEC is piloting a web-based platform (*e-Rencana Kegiatan dan Anggaran Sekolah*, or electronic school planning and budgeting) to help schools in selected districts better allocate and report on BOS transfers, as well other transfers or resources they may be receiving. The e-RKAS system helps schools in their planning and budgeting decisions to achieve the NES and MSS. The model is currently being evaluated and should be expanded if the results of the evaluation are positive. Similarly, the MoRA has also recently piloted the e-RKAM (*e-Rencana Kegiatan dan Anggaran Madrasah*) system for school planning and budgeting in two provinces and will expand the pilot to 2,000 *madrasah* or religious schools in 2019. Emerging lessons from this effort should be incorporated into BOS regulations by the MoEC and the MoRA in the near future, and electronic performance-based budgeting should be implemented across Indonesia for all schools and *madrasah*.

- **BOS *KINERJA*** This program aims to incentivize all schools to improve their performance. The top-performing schools, based on criteria set by the BOS regulations, will receive additional BOS resources. This program is included in the 2019 APBN among the BOS transfers, with a budgeted amount of IDR 1.5 trillion. (See Box 6.2 for more information.)

- **BOS *AFIRMASI*** Schools in remote areas have different costs and different needs, for example, for electricity generators. This program allocates additional resources to schools in those areas. This program is included in the 2019 APBN among the BOS transfers, with a budgeted amount of IDR 2.8 trillion.

SECOND, the GoI has developed a new teacher certification scheme that aims to improve linkages between the teacher professional allowance and student results.

The initial model, which was based on portfolio presentation,[188] was first complemented and then replaced by Teacher Professional Education and Training or *Pendidikan dan Latihan Profesi Guru* (PLPG) model, which required a 90-hour teacher training course. Similarly, in 2015, the PLPG was replaced with the Teacher Professional Education or *Pendidikan Profesi Guru* (PPG) model, which requires one year of training for new teachers, and six months of training for existing teachers. Since 2018, the PPG is the only mechanism to achieve teacher certification. However, its implementation is limited, given that there are only 45 institutions authorized to provide the training. Teachers hired under the MoRA also rely to the same institutions to obtain the PPG. This means that about 2 million teachers are currently in line to participate in the PPG to become certified.

THIRD, the GoI has piloted an incentive mechanism to improve teacher performance.

To improve linkages between teacher allowances and teacher performance, the MoEC has implemented the KIAT Guru Rural pilot (see Box 6.3). This pilot links the payment of the Teacher Remote Area Allowance (*Tunjangan Khusus Guru*, TKG) to indicators of teacher service performance. The first stage of the pilot was successfully implemented in rural areas and shows potential to improve student learning outcomes.

FOURTH, as of 2018-19, better coordination between the central government and SNGs has resulted in improvements in the process of allocating DAK Fisik for education.

Before deciding the transfer amount that each district should receive, the MoEC and local governments gather to discuss the latter's plan to address infrastructure gaps in education. The MoEC then validates the gaps with data from Dapodik, the ministry-wide administrative information system, to ensure that the plan proposed by the local governments is aligned with infrastructure needs. After the MoEC and the local government reach an agreement on the amount of DAK *Fisik* needed, the MoF allocates DAK *Fisik* funds for education and disburses them based on the progress of the agreed-upon plan. Presidential Decree No 43/2019 on Construction, Rehabilitation, and Renovation of Markets, Facilities of Higher Education Institutions, Islamic Higher Education Institutions, and Primary and Secondary Education Institutions regulates that the management of damaged classrooms has moved from MoEC to MoPWH with the aim that the classroom rehabilitation can be done in a larger-scale way. However, it is important that the validation mechanism with Dapodik data continues.[189]

BOX 6.3. **The success of the KIAT Guru program**

KIAT Guru Phase 1 (KGP1) has been implemented since 2016 to test two mechanisms to improve teacher presence, teacher service performance, and student learning outcomes in remote primary schools. First, a Social Accountability Mechanism (SAM) provides community members with an explicit role to monitor and evaluate teacher service performance and to ensure teacher accountability. Second, there is a Pay for Performance Mechanism (PPM), which links the payment of remote area allowances for teachers (*Tunjangan Khusus Guru*, TKG)—in the amount of up to one-time the teacher's base salary—with either teacher presence or teacher service quality.

KGP1 covers 203 primary schools in five disadvantaged districts, and it was implemented through a Recipient Executed Trust Fund (RETF) by *Bursa Pengetahuan Kawasan Timur Indonesia* (BaKTI), a national non-government organization (NGO), with directions from the Steering Committee chaired by the MoEC and the National Team for Acceleration of Poverty Reduction, under the Secretariat Vice President Office (TNP2K).

The efficacy of the two mechanisms has been tested by combining them into three intervention groups: (i) SAM, (ii) SAM + PPM based on teacher presence, and (iii) SAM + PPM based on a broad measure of the quality of teacher service performance.

The World Bank conducted an impact evaluation (IE) to identify which KGP1 intervention was most effective in achieving the outcome indicators. A total of 270 schools were randomly assigned into three intervention groups and compared with a control group. The IE analysis found statistically significant positive impacts. The SAM, combined with the PPM based on teacher presence ("Group 2"), had the strongest positive effects on student learning outcomes in mathematics and Indonesian language (at 0.19 and 0.17 standard deviations, respectively), as it increased the presence of TKG-recipient teachers in classrooms and improved parental involvement in meeting with teachers and in supervising learning at home.

The impact evaluation of KGP1, qualitative research, and process monitoring attributed the success of the interventions to four key elements: (i) actively engaging external stakeholders in monitoring and evaluating teacher performance; (ii) increasing parental involvement in learning; (iii) keeping teacher performance evaluation to a few simple and objective indicators; and (iv) paying teacher allowance based on objective performance indicator (Gaduh et al. forthcoming).

Source: World Bank team.

188 Based on academic qualifications and training, evidence of teaching experience, evidence on lesson planning and implementation, supervisor and principal assessment, publication and good practices, organizational experience, and rewards

189 The revitalization of SMK, regulated under Presidential Instruction No 9/2016, has also attempted to address school infrastructure and facilities issues in SMK.

Nonetheless, much remains to be done to improve the quality of spending in the education sector. Different actors and programs should align their actions toward student learning outcomes, improving coordination to maximize synergies and ensuring that all functions in the education service delivery system are properly fulfilled. The capacity of society to hold local governments, central government and school committees accountable for better quality education should also be increased. Specific policy recommendations include the following:

A

Strengthen coordination with SNGs & their capacity to implement education policy

SNGs are responsible for managing schools, and the central government provides them with a large amount of resources to do so (63 percent of overall education spending and 90 percent of the general education budget). Nonetheless, as noted above, SNGs have differing levels of capacity to manage education service delivery. To address this, the central government should consider:

1

Guaranteeing minimum financial capacity to implement education policy.

To ensure that all districts are able to deliver adequate education services, the central government needs to address flaws in the current design of the DAU transfer that create large discrepancies in education spending per student. Moving to a transfer formula that assumes similar expenditure needs per person, rather than by place, would help to ensure that more populous districts are better equipped to provide education services (see Intergovernmental Fiscal Transfers chapter for more details).

2

Strengthening the institutional capacity of districts to implement education policy, for example by introducing Capacity Improvement DAK

The World Bank (2013) local education governance index identified important gaps across districts to implement education policy. Formal mechanisms should be introduced to support SNGs with low capacity, either through support from the MoEC or from peer districts and provinces with high capacity. SNGs could also be offered resources conditional on improvement plans, with disbursement linked to the achievement of key milestones. The MoHA should implement a culture of achieving MSSs and launch additional incentives to motivate the achievement of MSSs, which guide the actions of districts and provide metrics to assess progress. Transfers could also be linked to the achievement of MSSs.

3

Improving SNG civil servants' capacity to utilize data for evidence-based policymaking.

The central government should help build the capacity of SNG civil servants to collect, process and analyze information related to the education sector, following the lead of cities such as Surabaya and DKI Jakarta, which use school-level data to identify gaps in the staffing of teachers and redistribute teachers across subdistricts as needed.

4

Boosting coordination on ECED, including in villages.

The introduction of the Village Law (Law No. 6/2014)[190] and the Village Fund (Dana Desa) have provided potential resources that can be used to support community-based ECED services. The Ministry of Villages issues an annual regulation on the Priority of the Use of the Village Fund. Ministry of Villages Regulation No. 19/2017 on the 2018 Priorities for Village Funds,[191] for example, listed the following activities for ECED as eligible spending: infrastructure, books and educational toys, incentives for ECED (community) and other education and culture-related activities agreed through the village meeting.

The priority list serves as guidance to be discussed and agreed on during village meetings. Given these laws and regulations, it is necessary to support villages to make informed decisions about investing in ECED. In addition, to maximize the impact of current funding, it is important to improve the necessary coordination between central, district and village governments.

The coordination should aim to meet national ECED standards outlined in Minister of Education Decree No. 137/2014, consisting of eight standards: (i) child development milestones (by age and domain); (ii) content; (iii) process; (iv) assessment; (v) teacher and education personnel; (vi) facility and equipment; (vii) management; and (viii) financing.

The subnational budget, APBD, can be used to expand the number and improve the quality of PAUD services using a staged approach, prioritizing children by age and socioeconomic background for one year of preschool, and then work on additional year for younger children. PAUD expansion can be incentivized through grants from central government for additional centers built and managed by district governments.

5

Strengthening the role of SNGs in helping BOS to reach its full potential.

Schools receive BOS funds to support their operations but having the capacity to use these resources is essential to improving education quality. Provinces and especially districts could provide more support to schools by guiding and monitoring the use of BOS funds. Although technical guidelines for BOS state that province- and district-level BOS teams should coordinate, not all SNGs take an active role in monitoring the proper use of BOS.

Greater enforcement of these guidelines is needed such that all SNGs help ensure that schools plan and budget BOS funds properly, receive BOS on time, execute BOS funds as required, and report on BOS utilization.[192]

190 http://www.dpr.go.id/dokjdih/document/uu/UU_2014_6.pdf

191 http://ditjenpp.kemenkumham.go.id/arsip/bn/2017/bn1359-2017.pdf

192 For example, BOS reporting from schools is a requirement for BOS disbursement. That said, if some schools are late in providing BOS report, provinces cannot disburse BOS funds to all schools in their jurisdiction. Having to wait until all schools complete their reporting therefore creates delays in BOS disbursement. Furthermore, with the new circular letter from MoHA 971-7791/2018, BOS has to be included in district budget. Parliament approval is needed both for the district and also the province budget. This mechanism may also contribute to the delay of BOS transfers.

B

Ensure that students are taught by high-quality teachers

Better coordination between central government and SNGs is also needed to ensure that teachers are of high quality. According to the Law on Decentralization, the central government is responsible for managing teachers, but provinces and districts intervene as they manage schools locally and address teacher shortages. Moving forward, all levels of government need to coordinate more effectively on the following:

1

Ensure that all teachers have the right pedagogical and technical competencies.

Just as the MoEC, which defines and implements pre-requisites for hiring civil servant teachers, SNGs and schools should also enforce a set of minimum requisites for contract and honorarium teachers. SNGs should increase their efforts to monitor the required competencies and qualifications of contract and honorarium teachers, and take action where non-compliance is found.

2

Clearly define responsibilities in teacher training

It is unclear which institutions are responsible for teacher training. For example, Law No. 23/2014 on Decentralization states that the central government should manage teachers and education personnel, whereas SNGs should supervise education management for basic education. It is unclear whether teacher training falls under the first or the second level of government. In addition, under Law No. 14/2005 on Teachers, teacher development is listed as a joint responsibility of central government and SNGs. As a result, teacher training is not prioritized by any actors in their education policy decisions, adversely affecting teachers. In addition, there is no mechanism to monitor the use of TPG funds by teachers. SNGs could introduce mechanisms to verify whether teachers are actually using TPG before disbursing additional funds for professional development.

2

Ensure continuous professional development to improve teacher competencies.

Due to the variation of budget availability, the implementation of teacher working groups as a part of teacher professional development is inconsistent. Teachers in remote areas are often not able to join the working group activities mostly due to distance and transportation costs issues. Strengthening teacher working groups can be done by increasing the resources, blending on-the-job training and in-the-job mentoring, and supporting the design of strategies to remediate poor student learning and teaching practices.

C

Improve M&E to increase accountability for the education sector

Strengthen and evaluate current actions from the central government to improve efficiency and effectiveness of government programs, such as BOS, TPG and DAK Fisik, and the KIAT Guru pilot. This will include an evaluation of the eRKAS platform launched by the MoEC, an evaluation of the new certification procedures linked to TPG, and evaluations of the impact of BOS Kinerja and the new process of implementation of DAK *Fisik*. KIAT Guru is piloting and evaluating the introduction of incentives to teachers in rural areas, and similar pilots should also be introduced for urban areas.

To ensure proper accountability, good quality, timely sectoral and fiscal data related to the education sector need to be available at a sufficiently disaggregated level (Box 6.4). This is the case both for the central and SNG levels. Despite a centralized ministry that has more control on planning and budgeting its education financial resources, the way education spending is recorded in the MoRA is not consistent with functional definitions.

For example, the budget line for basic salaries, allowances, and benefits for: (i) civil servant teachers in private *madrasah*; (ii) civil servant religious teachers who teach in MoEC schools; and (iii) salaries for MoRA district staff are blended into one category and hence cannot be distinguished from one another. Similarly, spending on TPG for civil servant teachers in private madrasah and religious teachers in MoEC schools are also blended into one spending category. In addition, a large portion of the MoRA's *madrasah* budget cannot be disaggregated by education level (under pre-tertiary). In 2016, 23 percent of the MoRA's *madrasah* budget was non-specified, with the rest allocated to different levels of education.

The lack of disaggregated data limits the ability to analyze spending by level of education across all levels of government.

BOX 6.4. **Accurate and disaggregated data are essential to achieve improvements in student learning outcomes**

Good quality data are essential for governments in planning, budgeting, executing, and evaluating development activities. Without accurate data on number of students, it is impossible to have a good understanding of how many schools, classrooms, and teachers needed. Governments need this information to plan and budget for school construction programs, new teacher hiring, etc. Data are also needed to identify inputs that are lacking to achieve the sector's objectives.

To be able to inform decision-making, data must be accurate, timely, disaggregated and widely available. Given the circumstances that the education sector is mostly decentralized, data should be available in each district and/or province. Education outcomes and administrative-related data are currently available and disaggregated down to the school level. Most of these data are managed by the MoEC and the MoRA, while education financing-related data are currently available in each district and/or province. However, these financing data, i.e., education budget and expenditure data, are not constructed in a standardized way that facilitates analysis of subnational education expenditure. For example, teacher training programs in Probolinggo district are coded/categorized as 'Pengembangan Keprofesian Berkelanjutan or PKB (Continuous Development Program)', while in Bireun District they are coded/categorized as 'Pelatihan bagi pendidik yang memenuhi standard (Training for Eligible Teachers)'.

Improvements in financial data require uniform program and activity classifications of reporting for education budget execution at the district and province levels. Unlike general education under the MoEC, which is decentralized, the MoRA's education financial data are managed at the central level, while the current data are not sufficiently disaggregated to estimate functional and economic classifications. For example, the budget line for salaries and allowances for civil servant teachers in private madrasah is combined with other personnel expenditure, such as civil servant religious teachers in schools under the MoEC, as well as salaries for MoRA district staff. This makes it difficult to estimate total teacher costs for madrasah.

Ideally, data on education financing should be linked to data on education outcomes, such as participation rates, test scores, or other education outcomes data in each education level/subsector. In this way, government would be able to assess the efficiency and effectiveness of education spending in each subsector. This requires financial data to be disaggregated by education level/subsector. Currently, the administrative-related data such as number of students, number of teachers, school basic characteristics, and national exam test scores can be disaggregated by education level. However, most of the financial data, such as expenditure on teachers' salaries or on school infrastructure, are not sufficiently disaggregated. This is where the link of the two types of data needs to be established.

Finally, the GoI can improve the accountability of the education sector by launching a National Education Quality Initiative. Such an initiative would help to strengthen the student learning assessment system and improve its credibility. For example, the Center for Student Assessment (Puspendik) at the MoEC should continue its efforts to improve the credibility of the national exam and expand the scope of the national diagnostic test, the results of which should be made public and benchmarked to international exams. The National Education Quality Initiative should also make a concerted effort to improve the availability of data on education financing and the use of education resources to promote the effectiveness and efficiency of spending. In addition, it could provide better information on students' results and on the resources allocated to the sector. With backing from political leaders at the highest level, a national initiative for education would help to ensure that all Indonesians have access to high quality education.

Annex 6–1

TABLE A.6.1. Non-quantitative targets and progress of RPJMN 2015-2019

Policy objective	Progress
Increase readiness of secondary students to the labor market or continue to higher education	The program to revitalize vocational educations is creating links between schools and labor market, but the program has reached a very limited number of schools.
Increase quality assurance for education service delivery	The MoEC is monitoring the National Education Standards (NES), but the results are not used yet to improve school practice.
Increase the availability of reliable curriculum, and comprehensive assessment system	The implementation of K13 has continued, but many schools are not implementing it correctly. The assessment system has been improved with the introduction of computer-based tests.
Increase proportion of vocational secondary students who participate in industrial apprenticeship programs	Apprenticeship programs reach a small set to vocational students.
Increase quality of teacher management by improving teacher distribution and fulfilling teaching hours requirement; increase incentive and facilities of teacher professional and career development for teachers in remote (special) areas	The efforts to improve teacher distribution has been modest.
Increase availability and quality of education infrastructure and facilities based on Minimum Service Standard (MSSs) criteria	Still a large number of schools have poor school conditions, not meeting MSSs.
Develop laws and/or regulations on 12 years basic (mandatory) education.	Regulations have improved, for example with the issuance of MSSs for secondary education.

Source: authors

TABLE A.6.2. Eight national education standards (NES) and criteria

Graduate competence Progress	
1.1.	Graduates possess attitude dimension of performance
1.2.	Graduates possess knowledge dimension of performance
1.3.	Graduates possess skill dimension of performance
Education Content	
2.1.	Learning materials are in line with graduate competence formulation/design
2.2.	School-based Curriculum is developed according to the stipulated procedure
2.3.	School is implementing the curriculum according to the regulation(s)
Learning Process	
3.1.	Schools plan learning process according to the regulation(s)
3.2.	Learning process is implemented accurately
3.3.	Supervision and authentic assessment are conducted during learning process

Education Assessment	
4.1.	Education assessment is implemented according to competence domain
4.2.	Assessment technique(s) is/are objective and accountable
4.3.	Education assessment is to be followed up
4.4.	Assessment instrument(s) is/are to be in line with assessment aspects
4.5.	Assessment needs to follow the procedure
Teachers and Education Personnel	
5.1.	Teachers availability and competency are aligned with the regulation
5.2.	Principals availability and competency are aligned with the regulation
5.3.	Administration staff availability and competency are aligned with the regulation
5.4.	Laboratory staff availability and competency are aligned
5.5.	Librarians availability and competency are aligned with the regulation
Facilities and infrastructure	
6.1.	Sufficient school student intake capacity
6.2.	Schools possess proper and sufficient facilities and infrastructure
6.3.	Schools possess complete and proper facilities and infrastructure
Management	
7.1.	Schools conduct implementation planning
7.2.	Program management is implemented according to the regulation
7.3.	Principals are to show good performance in his/her school leadership
7.4.	Schools manage MIS
(Education) Funding	
8.1.	Schools provide cross-subsidy service
8.2.	School operational load is aligned with the regulation
8.3.	School implement sound fund management