INOVASI Phase I Achievements and Analysis: What works to improve learning outcomes in Indonesian schools?

ACTIVITY COMPLETION REPORT

2016 - 2020

June 2020
INOVASI – Innovation for Indonesia's School Children

Ratu Plaza Office Tower 19th Floor,
Jl. Jend. Sudirman Kav 9, Jakarta Pusat, 10270
Indonesia
Tel : (+6221) 720 6616
Fax : (+6221) 720 6616
http://www.inovasi.or.id

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Cover photo courtesy of Palladium

The governments of Australia and Indonesia are partnering through the Innovation for Indonesia’s School Children (INOVASI) program. INOVASI seeks to understand how to improve student learning outcomes in literacy and numeracy in diverse schools and districts across Indonesia. The first phase of the program (AUD49 million) began in January 2016 and continued until June 2020. Working with Indonesia’s Ministry of Education and Culture, INOVASI has formed partnerships with 12 districts in: West Nusa Tenggara; Sumba Island, East Nusa Tenggara; North Kalimantan; and East Java.

INOVASI is an Australia–Indonesia Government Partnership – Managed by Palladium.
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<th>Version</th>
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<td>1.0</td>
<td>15 June 2020</td>
<td>Program Director</td>
<td>N/A</td>
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<td>2.0</td>
<td>5 August 2020</td>
<td>Program Director</td>
<td>Laila Yudiati</td>
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<td>3.0</td>
<td>15 December</td>
<td>Program Director</td>
<td>Laila Yudiati</td>
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### Acronyms, abbreviations and Bahasa Indonesia terms

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<th>Description</th>
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<tr>
<td>ACDP</td>
<td>Analytical and Capacity Development Partnership</td>
</tr>
<tr>
<td>AKSI</td>
<td>Indonesian students’ performance assessment (<em>Asesmen Kinerja Siswa Indonesia</em>)</td>
</tr>
<tr>
<td>AUD</td>
<td>Australian dollars</td>
</tr>
<tr>
<td>Bappenas</td>
<td>Indonesian Ministry of National Planning and Development</td>
</tr>
<tr>
<td>BOS</td>
<td>schools operational funds (<em>Bantuan Operasional Sekolah</em>)</td>
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<td>BOSDA</td>
<td>regional schools operational funds (<em>Bantuan Operasional Sekolah Dearah</em>)</td>
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<tr>
<td>CPD</td>
<td>continuing professional development</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<tr>
<td>DFAT</td>
<td>Australian Department of Foreign Affairs and Trade</td>
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<tr>
<td>GESI</td>
<td>gender equality and social inclusion</td>
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<tr>
<td>IDR</td>
<td>Indonesian rupee</td>
</tr>
<tr>
<td>ID-TEMAN</td>
<td>Improving Dimensions of Teaching, Education and Learning Environment program</td>
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<tr>
<td>INOVASI</td>
<td>Innovation for Indonesia's School Children (<em>Inovasi untuk Anak Sekolah Indonesia</em>)</td>
</tr>
<tr>
<td>KKG</td>
<td>teachers’ working groups (<em>kelompok kerja guru</em>)</td>
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<tr>
<td>KOMPAK</td>
<td>Australia–Indonesian government partnership to reduce poverty</td>
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<tr>
<td>KPV</td>
<td>Islamic primary school</td>
</tr>
<tr>
<td>MERL</td>
<td>monitoring, evaluation, research and learning unit</td>
</tr>
<tr>
<td>MoEC</td>
<td>Indonesian Ministry of Education and Culture</td>
</tr>
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<td>MoRA</td>
<td>Indonesian Ministry of Religious Affairs</td>
</tr>
<tr>
<td>Muhammadiyah</td>
<td>Islamic organisation in Indonesia</td>
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<tr>
<td>NGO</td>
<td>non-governmental organisation</td>
</tr>
<tr>
<td>NTB</td>
<td>West Nusa Tenggara</td>
</tr>
<tr>
<td>NTT</td>
<td>East Nusa Tenggara</td>
</tr>
<tr>
<td>NU Ma’arif</td>
<td>Islamic organisation in Indonesia (<em>Nahdlatul Ulama Ma’arif</em>)</td>
</tr>
<tr>
<td>OPOB</td>
<td>One Person, One Book program</td>
</tr>
<tr>
<td>PDIA</td>
<td>problem-driven iterative adaptation approach</td>
</tr>
<tr>
<td>PIRLS</td>
<td>Progress in International Reading Literacy Study</td>
</tr>
<tr>
<td>PISA</td>
<td>Programme for International Student Assessment</td>
</tr>
<tr>
<td>RISE</td>
<td>Research for Improving Systems of Education project</td>
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<tr>
<td>SIL</td>
<td>Summer Institute of Languages (<em>Suluh Insan Lestari</em>)</td>
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<tr>
<td>SIPPI</td>
<td>INOVASI’s education and learning survey (<em>Survei INOVASI Pendidikan dan Pembelajaran Indonesia</em>)</td>
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<td>TASS</td>
<td>Technical Assistance for Education System Strengthening program</td>
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<tr>
<td>Temu INOVASI</td>
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<td>Trends in International Mathematics and Science Study</td>
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<td>United Nations Children’s Fund</td>
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EXECUTIVE SUMMARY

The Innovation for Indonesia’s School Children (Inovasi untuk Anak Sekolah Indonesia – INOVASI) program is a partnership between the governments of Australia and Indonesia. INOVASI includes Indonesia’s Ministry of Education and Culture (MoEC), Ministry of Religious Affairs (MoRA), the National Development Planning Ministry (Bappenas) and sub-national partners in the provinces of West Nusa Tenggara (NTB), East Nusa Tenggara (NTT), North Kalimantan and East Java. The program seeks to identify and support changes to education practice, systems and policy that demonstrably accelerate improved student learning outcomes. INOVASI is managed by Palladium on behalf of Australia’s Department of Foreign Affairs and Trade (DFAT). The program was planned as an eight-year initiative over two phases. Phase I commenced on 18 January 2016 and concluded on 30 June 2020. This activity completion report was prepared during a six-month transition period (January–June 2020) as INOVASI prepared for Phase II that began in July 2020.

The goal of INOVASI is to accelerate progress towards improved learning outcomes for Indonesian students. It focuses on three areas of investigation: quality of teaching in the classroom; quality of support for teachers; and learning for all. INOVASI had three expected end-of-program outcomes to achieve this goal:

1. A credible body of evidence is available of what policy and practice changes work to improve student learning outcomes in Indonesia.
2. Decision makers have access to and use this evidence to facilitate and implement more effective education reforms.
3. The effective policy and practice changes identified are reflected in Indonesian government (district, provincial, national) policies, regulations, budgets and plans.¹

Working closely with the Technical Assistance for Education System Strengthening (TASS) program, INOVASI substantially achieved these three outcomes in the first phase and is set to continue building on these achievements in Phase II. TASS was a responsive, demand-driven technical assistance facility also funded by DFAT. Working with MoEC, MoRA and Bappenas, TASS was designed to improve the effectiveness of policy and practice in the education sector through a systems strengthening program that operated on a response-to-demand basis. In INOVASI Phase II, TASS will merge into INOVASI as a technical unit.

During the first four and a half years of the program, INOVASI established itself as an adaptive, responsive program and gained the trust of the Indonesian government as a key partner in development. Acting as a critical friend, INOVASI supported government in making key reforms in the system and leveraged the evidence from its pilots to broker change in both the policy and service delivery space. Working collaboratively with Harvard’s’ Centre for International Development, INOVASI pioneered a problem-driven iterative adaptation (PDIA) approach to supporting education sector reform.

Previous efforts to reform education in Indonesia achieved participation rates of close to 100 per cent for primary school children. However, learning outcomes have not improved significantly using the traditional top-down cascade training approach. International ‘best practice’ solutions imported over the years failed to take root in Indonesia and brief, one-off training activities have not resulted in meaningful change to teaching practice. Thus INOVASI took a different approach in facing these challenges by working with national and local partners, exploring the problems from their perspective

¹ These end-of-program outcomes were updated for Phase II as outlined in the INOVASI Phase II Design Update document (DFAT, 2020).
and then developing solutions using trial and error to achieve the best results in a given context. We call this an iterative approach and it is a signature feature of the INOVASI program. Through this approach, we learn together what does and doesn’t work to support sustainable improvements in student learning over time.

INOVASI is currently working in 22 districts across four provinces: West Nusa Tenggara (NTB), East Nusa Tenggara (NTT), North Kalimantan and East Java. This includes 17 original partner districts and five additional districts that joined in 2020 with independent funding. Over Phase I, the program designed and implemented 110 distinct pilot activities, including 36 implemented by non-government partners, universities and the Islamic organisations, Muhammadiyah and Nahdlatul Ulama (NU) Ma’arif. The pilots started in 2017 with Guru BAIK that used an adapted action research approach to explore problems in the classroom. This approach helped change teachers’ mindsets – shifting their focus from delivering the curriculum to ensuring their students were learning. Although teachers’ approaches improved significantly, the gains recorded in student learning outcomes were modest. Learning from this experience, we adopted a cluster-based short-course approach to continuing professional development in our second round of pilots, through routine school cluster teachers’ working group meetings over a twelve-month period. Results were encouraging and we recorded substantial gains in students’ literacy and numeracy scores (especially in the poorer and more remote regions). We further iterated the approach in the next round of pilots by adding a politically-informed component to link efforts at the school cluster level with the executive branches of government in the districts. Our aim was to link the evidence of positive changes in practice with system-level changes at district and eventually provincial levels. The approach worked best in districts like Bulungan in North Kalimantan and East Sumba in East Nusa Tenggara. While the initial inputs were small in scale, the team built strong collaborative relationships with local authorities and helped design large scale-out programs fully funded by the district. These collaborations not only had an impact on attitudes and practices at the level of teachers and school leaders but also at the political and executive leadership levels within government. More resources were directed at reforms focusing on quality in the sector as a whole and the outcomes of these initiatives were subject to more scrutiny.

These positive trends led to higher levels of co-investment and joint funding than expected from government partners in Phase I of the program. Approximately 1,500 schools benefitted from local government co-investment and joint funding support for key INOVASI pilot work. Between 2017 and 2019, partner district governments allocated nearly AUD1.9 million through co-investment, starting with AUD286,000 in 2017, nearly doubling to AUD488,000 in 2018 and doubling again to AUD1.2 million in 2019. In 2020, another AUD1.2 million will bring the direct co-investment up to AUD3.1 million to date. The COVID-19 pandemic is likely to affect these 2020 commitments but the general trend is clear – more domestic resources are going into quality-focused reforms than ever before. While the demonstration effect of INOVASI’s pilots helped stimulate this shift in resource allocation, we also supported our government partners in the process of optimising their planning and budgeting processes so they had enough funds to invest in initiatives proven to promote quality in education and improve students’ learning outcomes.

These successful pilots and scaling efforts informed both sub-national and national policy by identifying the problems and demonstrating what can work at classroom, school and district level to improve learning outcomes. Districts issued 51 new regulations to consolidate ongoing efforts to improve literacy, numeracy and inclusion. The following five high-level policy and program changes illustrate the efficacy of the approach at the national level:
• The literacy pilot activity in North Kalimantan identified a problem of book availability arising from a restrictive, centralised and slow approval process in Jakarta. Around 85 per cent of children say they love to read but they cannot access appropriate books and literacy levels are chronically low. Following extensive consultations, the Ministry of Education and Culture (MoEC) issued two pivotal decrees. The first decree provides an expanded book list that now includes pre-primary books that primary school students can use for beginning reading. The second decree provides a broad list of approved books that includes publications by non-governmental organisations and small publishers.

• In West Nusa Tenggara, East Nusa Tenggara and East Java, INOVASI developed and piloted a Student Learning Profile (Profil Belajar Siswa) so teachers can identify children’s disabilities and learning difficulties. In collaboration with TASS and MoEC, INOVASI developed an application that links to MoEC’s information management system. MoEC piloted the instrument nationally in more than 3,000 schools and trained more than 127,000 teachers or assessors to use the profile and the linking application. Lessons from the field testing were used to refine the instrument.

• The Ministry of Religious Affairs (MoRA) developed a continuing professional development (CPD) program with initial technical support from TASS. MoRA is scaling out this program nationally with a World Bank loan that also covers other areas to strengthen education outcomes. INOVASI supported the pilot process for the program and MoRA has decided to adopt and adapt the INOVASI modules on literacy and inclusion for this national program.

• INOVASI’s modules were approved for use in MoEC’s national continuing professional development program in 2019, however, this program was superseded by the 2020 program.

• In early 2020, MoEC launched a large-scale, nation-wide grants program, called Program Organisasi Penggerak (‘change agent’ program). This is the first MoEC initiative to mobilise non-government partners to run its continuing professional development. MoEC consulted intensively with the grants team to learn from INOVASI’s experience of implementing its partnership program. INOVASI also provided technical support in the form of a consultant to design the monitoring and evaluation system, and assistance in adopting the PDIA approach, based on INOVASI’s experience. INOVASI’s modules for continuing professional development in literacy, numeracy and inclusion are available and approved for adoption or adaptation in this program.

• MoEC’s Program Organisasi Penggerak, is using a problem-driven iterative adaptation (PDIA) approach specifically for grantees who have planned interventions that are yet to be proven successful. This decision was based on INOVASI’s experience of using this methodology.

Moving into Phase II, INOVASI will build on the momentum established in Phase I. The recent appointment of Nadiem Makarim, a reform-focused Minister for Education and Culture, combined with the strong working relationships and trust established in the provinces and districts between INOVASI and TASS with government and non-government counterparts and ministerial advisors, has created a platform for the forward agenda. The evidence from pilots and research in Phase I provides the basis for ongoing reform. MoEC has signalled potential areas of collaboration with INOVASI on the key reform areas of national curriculum, assessment and teacher management policy. Partner provinces and districts are excited about potential ongoing participation in the INOVASI partnership to improve learning outcomes.
As an adaptive program, we will use the lessons from Phase I to improve the approach in Phase II. In addition to merging INOVASI and TASS, the main change will be to reconceptualise the program role from designer and implementer to broker, catalyst, collaborator, evaluator and communicator. Phase II will seek a balance between pilots, scale out and systemic change – with the latter ultimate outcome sought in Phase II. Among other things, this means a stronger, more efficient monitoring, evaluation, research and learning (MERL) approach and a stronger role in brokering partnerships with the private sector and civil society. Thus, INOVASI will continue its adaptive approach to working with partners at national, sub-national and local levels to identify and solve problems together.
INOVASI HIGHLIGHTS
January 2016 - June 2020

Allocated District APBD Funds AUD 3.1 million

The numbers above include both INOVASI school partners as well as scale-out schools
### SUMMARY DATA

<table>
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<th>Name of activity</th>
<th>Innovation for Indonesia’s School Children (INOVASI) Phase I</th>
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<td>Approved budget for managing contractor</td>
<td>AUD51 million (excluding Indonesian government financing and separate Australian government funds for design, tender and independent M&amp;E)</td>
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<td>Final expenditures</td>
<td>AUD49,155,100</td>
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<td>Source of funds and other contributions</td>
<td>Australian Department of Foreign Affairs and Trade Government of Indonesia (district/provincial/national)</td>
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<tr>
<td>Program duration</td>
<td>4.5 years (excluding Phase II)</td>
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<tr>
<td>Start date</td>
<td>18 January 2016</td>
</tr>
<tr>
<td>End date</td>
<td>30 June 2020</td>
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<td>Australia Indonesia Aid Investment Plan objective:</td>
<td>Objective 2: Human development for a productive society</td>
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<tr>
<td>Program objective</td>
<td>Goal: to accelerate progress towards improved learning outcomes for Indonesian students End of program outcomes: 1. A credible body of evidence is available of what policy and practice changes work to improve student learning outcomes in Indonesia.[1] 2. Decision makers have access to and use this evidence to facilitate and implement more effective education reforms. 3. The effective policy and practice changes identified are reflected in Indonesian government (district, province, national) policies, regulations, budgets and plans.</td>
</tr>
<tr>
<td>Program summary</td>
<td>The Innovation for Indonesia’s School Children (INOVASI) program is a partnership between the governments of Australia and Indonesia. Working directly with local partners, INOVASI seeks to understand how student learning outcomes in literacy and numeracy can be improved in diverse primary schools and districts across Indonesia.</td>
</tr>
<tr>
<td>Government of Indonesia partners</td>
<td>The Ministry of Education and Culture (Subsidiary Arrangement signatory and Implementing Authority), also working with the Ministry of Religious Affairs, the Ministry of National Development and Planning, the Ministry of Home Affairs, the Ministry of Village and Development of Disadvantaged Regions and the Ministry of Administrative and Bureaucratic Reform, as well as the Ministry of Finance</td>
</tr>
<tr>
<td>Activity location:</td>
<td>West Nusa Tenggara, East Nusa Tenggara, North Kalimantan and East Java</td>
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\[1\] The original end-of-program outcomes in the program design document (May 2014) refer to a ‘robust’ body of evidence. Following advice from DFAT, we replaced the term ‘robust’ in the first end-of-program outcome with ‘credible’ since we will not conduct randomised controlled trial type research. Rather, we aim to explore and test local solutions to local problems to produce plausible and compelling evidence for decision makers.
1 OVERVIEW

This activity completion report for the Innovation for Indonesia's School Children (INOVASI) program Phase I was compiled by the Managing Contractor during the six-month transition period (January–June 2020), as INOVASI prepared for the next phase of the program. Phase II commenced in July 2020 and integrates the INOVASI and TASS programs.

The report begins with an overview of the program’s rationale, relevance, goals and expected outcomes. This section also covers changes in the operating context, the types of support provided as well as a financial summary. We then analyse the program’s progress and achievements by summarising the program outcomes, the body of evidence produced and its influence on policy designed to improve learning outcomes. The final sections discuss: the challenges, risks and lessons learned; the monitoring, evaluation, research and learning (MERL) component; the communications component; cross-cutting issues; and finally, sustainability. Each of these sections describes lessons learned, what worked well and what can be improved in Phase II. In this way, the activity completion report is forward looking and will inform the implementation in Phase II.

1.1 Program Rationale and Relevance

The Australian Department for Foreign Affairs and Trade (DFAT), in consultation with the Indonesian government, designed the INOVASI program in 2014 to address two main challenges. Firstly, while Indonesia had succeeded in getting children into school, this had not resulted in improvements in children’s learning outcomes. Secondly, previous efforts to improve education focused on better access and top-down, one-size-fits-all solutions to improve learning but this approach had not resolved what has become known as Indonesia’s ‘learning crisis’.

‘INOVASI is designed to be transformational by investigating what works and what doesn’t work to get teachers teaching better and students learning more, and why, in order to leverage Indonesia’s substantial spend in education. It is not designed to be a program for directly delivering education services. It will be transformational by:

a. Understanding local challenges and opportunities to improving student learning outcomes by bringing together key government and non-government stakeholders;

b. Generating evidence of what works and what does not work to improve student learning in Indonesian classrooms by trialling and testing local solutions (tested strategies);

c. Sharing this evidence with stakeholders in target and non-target districts to promote adaptation and replication of tested strategies in target and non-target districts’ (Final design of INOVASI) (DFAT, 2014).

Six years on, improving the quality of basic education remains a priority for Indonesia and its National Mid-term Development Plan 2020–2024 recognises this as essential to the country’s future economic development (Bappenas, 2019). Australia has supported the education sector in Indonesia for over two decades.2 This history of cooperation in the sector underpins the bilateral relationship as well as people-to-people links between the countries. INOVASI is one of several programs that DFAT funds to support improved quality basic education in Indonesia. Others include, for example, a partnership

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2 Australia’s support to Indonesia’s education development spans over 70 years, if the Columbo Plan and Australian Volunteers Abroad (AVI) programs are included.
with UNICEF in Papuan provinces, a World Bank partnership (ID-TEMAN), a governance program (KOMPAK) and the global research initiative, Research for Improving Systems of Education (RISE). DFAT’s ‘... current strategy supports Indonesia’s own systems to improve quality of education by using their own funds in ways that are efficient and effective’ (Nichols and Bodrogini, 2019: i).

1.2 Goal and Expected Outcomes

The goal of INOVASI is to accelerate progress towards improved learning outcomes for Indonesian students. It focuses on three areas of investigation: quality of teaching in the classroom; quality of support for teachers; and learning for all. Under INOVASI’s theory of change, three end-of-program outcomes will achieve this goal:

1. A credible body of evidence is available of what policy and practice changes work to improve student learning outcomes in Indonesia.³

2. Decision makers have access to and use this evidence to facilitate and implement more effective education reforms.

3. The effective policy and practice changes identified are reflected in Indonesian government (district, provincial, national) policies, regulations, budgets and plans.

The program was designed to achieve these sequential outcomes after eight years with the first outcome contributing to the second and the second contributing to the third. Working closely with TASS, INOVASI has made significant progress toward these three outcomes in Phase I and is set to strengthen this achievement in Phase II. However, the three outcomes are no longer regarded as strictly linear or sequential. Experience has shown that while each contributes to the others, they may be achieved concurrently or in a different sequence, in relation to specific policy outcomes. For example, policymaking is a political process and providing evidence to support policy improves that process but evidence is produced continuously. Thus leveraging emerging evidence and communicating this in targeted ways is also ongoing, as personnel change and the political and policy environment evolves.

1.3 Changes in INOVASI’s Operating Context

INOVASI Phase I coincided with the first term of President Joko Widodo whose national agenda and equalising, meritocratic vision created a conducive atmosphere for education reforms and specifically for efforts to improve equity and quality. These aspirations are reflected in government’s policy of developing the country from the geographic fringes and working inwards. The national focus on literacy aligned with grassroots movements and with INOVASI’s interest in building foundational skills. At the same time, within the Ministry of Education and Culture (MoEC), the head of the research and development body (Balitbang) took ownership of INOVASI as a vehicle to support the government’s broader reform agenda.

This political climate helped INOVASI to achieve its end-of-program outcomes by the end of Phase I⁴ and to build its credibility as a partner as the government embarks on its ambitious reform program.

³ The original end-of-program outcomes in the program design document (DFAT 2014) refer to a ‘robust’ body of evidence. Following advice from DFAT, we replaced the term ‘robust’ in the first end-of-program outcome with ‘credible’ since we will not conduct randomised controlled trial type research. Rather, we aim to explore and test local solutions to local problems to produce plausible and compelling evidence for decision makers.

⁴ Note that the end-of-program outcomes were intended to be met by the end of Phase II, after eight years of program implementation. The INOVASI Phase II design includes updated end-of-program outcomes.
under the new Minister for Education and Culture, appointed in October 2019. This reform program addresses the curriculum, student assessments and teachers’ continuing professional development.

Notwithstanding the positive climate for reform, challenges for education remain. The progress in Indonesia’s education system over the last two decades led to increased spending and a range of policy reforms to ensure gender-balanced, near-universal school enrolment. However, the issues of improving quality and equity still need to be addressed. Sometimes referred to as a ‘learning crisis’, many Indonesian children do not acquire the fundamental skills to participate in the economy, society or further education and fall behind their peers in the region and globally. Thus, the Australian and Indonesian governments agreed that INOVASI should focus on literacy, numeracy and inclusion in the early grades over the course of Phase I.

Due to its adaptive methodology, INOVASI accommodated the lessons learned during its implementation and responded to changes in the operating context. Examples of this include: (1) adapting and strengthening the problem-driven iterative adaptation (PDIA) approach in pilots to incorporate increasingly sophisticated technical, political and cultural methodology; (2) increasingly engaging with the Technical Assistance for Education System Strengthening (TASS) program; (3) responding to local situations, such as the earthquakes in Lombok and West Nusa Tenggara; (4) adapting to changes in government policy and personnel at sub-national and national levels, including the appointment of new ministers in 2019; and (5) pivoting to support government during the COVID-19 crisis that began in February 2020.
1.4 Types of Support

INOVASI worked in 17 key partner districts in four provinces, commencing with West Nusa Tenggara in 2016, adding East Nusa Tenggara and North Kalimantan in 2017, and East Java in 2018. Towards the last year of the program, five additional districts became INOVASI implementing partners. While Phase I activities were mainly at sub-national level, INOVASI also worked with policymakers, administrators, practitioners and stakeholders at national, provincial, district and school levels to identify local problems related to teaching and learning, and to jointly develop appropriate solutions for local contexts. Based on INOVASI’s theory of change, the primary mode was to pilot these local solutions and support scale out at district level. The aim was to find out what works and, conversely, what doesn’t work to improve learning outcomes, and to use this evidence to inform local and national policy. The pilots mainly involved continuing professional development conducted in school cluster-based teachers’ working groups (KKGs).

The first year of the program, 2016, served as an inception period to establish the program and explore problems associated with learning at the national and district level. In 2017, INOVASI began a classroom action research pilot, Guru BAIK, based on the problem-driven iterative adaption (PDIA) approach developed by the Centre for International Development at Harvard University. Learning from this pilot in West Nusa Tenggara and further developing the PDIA approach, we worked with local stakeholders to explore the problems in a pre-pilot period. This was followed by a series of technically and politically informed ‘short course’ pilots in 2018–2019. These included pilots to improve literacy, language transition, numeracy, inclusion, community participation, leadership and multi-grade teaching. Through a mix of small grants and sub-contracts, INOVASI also partnered with 31 non-governmental organisations, universities and local agencies (including Indonesian research foundations) to pilot a range of approaches to improving learning outcomes and to conduct research. In total, we conducted 110 pilots, consisting of 74 INOVASI-funded pilots and 36 locally-funded pilots (through local government budget funds, the schools’ operational grants – BOS – and corporate social responsibility funds – CSRs) across 22 partner districts and four provinces. The 74 INOVASI-funded pilots included three Guru BAIK pilots, 37 short-course style pilots and 34 grant-based partnerships pilots.

Research and policy work continued simultaneously at district, provincial and national levels. Around 50 studies were conducted and 51 policies were issued. In addition to working closely with TASS, the program collaborated with UNICEF, KOMPAK, ID-TEMAN, RISE and the Tanoto Foundation’s PINTAR project.

The grant-based partnerships allowed INOVASI to learn from local partners and also to broker government collaboration and coalitions with the non-government sector. We engaged in public diplomacy through various platforms and events, such as Temu INOVASI.\(^5\) We also provided

\(^5\) Temu INOVASI is an event where education policymakers, practitioners and communities meet to discuss how to improve learning outcomes. The event is hosted by INOVASI together with our government partners approximately every three months.
technical support, including to MoEC, to: (1) develop and pilot a national students’ performance assessment (AKSI); (2) review and update a national teacher competency framework; (3) develop new approaches to approving books for schools; and (4) develop and pilot an instrument for identifying special needs (Student Learning Profile). INOVASI worked with the Ministry of National Planning and Development (Bappenas) and TASS to contribute to the National Mid-term Development Plan (RPJMN) as well as with the Ministry of Religious Affairs (MoRA) to pilot its continuing professional development program (again, with TASS). Partnerships with NU Ma’arif and Muhammadiyah, Indonesia’s main Islamic organisations, were politically significant and provide a basis for further improvements in the Islamic basic education sector in Phase II.

Initially, DFAT had envisaged that TASS would work closely with MoRA while INOVASI would work with MoEC. This division related to the different management models in the two ministries. MoEC takes a decentralised approach, with responsibilities devolved to the regions and districts, while MoRA maintains a centralised model with the Islamic schools (madrasah) coming directly under the ministry. Thus in the first two years, INOVASI did not engage closely with MoRA or work with the madrasah. However, at the beginning of 2018, inputs from local governments and NU Ma’arif, resulted in a change of policy and MoRA became a part of the INOVASI program. TASS was working within MoRA to support the development and piloting of a national continuing professional development system for their teachers and from 2018 INOVASI also became involved in this process. INOVASI helped to implement the pilot in East Java and to adapt approaches and modules for teacher training in literacy and numeracy for use in madrasah. At the same time INOVASI expanded the pilots in West Nusa Tenggara and East Java to include clusters of madrasah and engaged a senior Islamic education specialist – a resource shared with TASS. Following a series of negotiations, INOVASI signed memorandums of understanding with both NU Ma’arif and Muhammadiyah. The work with MoRA and the Islamic organisations continued for the remainder of Phase I and is being further strengthened in Phase II.

As a result of the work with MoRA and the Islamic education sector, MoRA adopted INOVASI’s modules on literacy and numeracy for its continuing professional development program that will be scaled out nationally with financial support from a World Bank loan. The largely private Islamic schooling sector consists predominately of small, family-based madrasah serving rural and poor communities but 20 per cent of Indonesian children are schooled in these madrasah. While the fundamentals of teaching and learning, literacy, numeracy and inclusion are the same across the different sectors, madrasah face specific problems of limited resourcing and supervision. Nonetheless, MoRA is committed to improving teacher quality and learning outcomes, and the community support for madrasah and the Islamic sector provides an excellent basis for partnership. The work in Phase I has laid the foundations for INOVASI to build on this partnership in Phase II.

1.5 Expenditure and Financial Analysis

By the end of Phase I, Palladium had invoiced DFAT for a total of AUD49,155,100 in reimbursable costs for the program covering the whole Phase I duration from January 2016 to 30 June 2020.

INOVASI spent more for each financial year of the program as it added more provinces and extra activities across national and provincial levels. The spending patterns across financial years are shown in figure 1.
During INOVASI Phase I, several external audits were conducted, with the latest one completed in March 2020 for the 2019 calendar year period. The audit was conducted by Johan Malonda audit firm and there were no major negative findings in relation to compliance nor value for money. All audit findings and action items were followed up and reconciled, with detailed audit reports shared with DFAT.
2 PILOTS

Pilots are at the heart of INOVASI’s approach to finding out what works to improve learning outcomes and we funded 74 locally contextualised pilots in schools and districts in Phase I. INOVASI strengthened the evidence from these pilots (summarised in section 2.3) through a range of research activities. Our communications strategy leveraged this evidence base to support policy development across different parts of the system and to broker exchanges of experience, skills and capability across the actor groups in the sector.

INOVASI facilitated four rounds of pilots in Phase I. Round 1 in 2017 consisted of the Guru BAIK and Gema Literasi pilots in West Nusa Tenggara. A period of exploring problems followed in late 2017 and early 2018 and, based on our findings, we designed the Round 2 pilots that we conducted in 2018 and 2019. These pilots focused on literacy, numeracy, inclusion, language transition, multi-grade learning and school leadership. Over the same period (2018–2019), our non-governmental organisation and university partners conducted the grant-funded pilots on the same themes. Taking lessons from the Round 1 and 2 pilots, Round 3 took place in the second half of 2019, focusing again on literacy, numeracy, inclusion and language transition. Round 4 pilots, conducted in parallel with Round 3, focused on systemic reform at district and provincial level to support the institutionalisation and scale out of successfully piloted continuing professional development programs. These pilots were known as ‘Jalan Andrews’ (Andrews’ way) referring to Matt Andrews, one of the principal authors of the problem-driven iterative adaptation approach (Andrews, Pritchett and Woolcock 2017).

When considering how far INOVASI helped accelerate progress towards improved learning outcomes in Phase I, we need to recognise that INOVASI is a partnership. In the first two years, our activities focused on building working relationships, exploring problems and developing the PDIA approach to finding solutions at school and classroom levels. The Round 1 pilots, Guru BAIK and Gema Literasi, demonstrated that changes in teaching practice can improve learning outcomes, especially in literacy. These pilots were subsequently scaled out in six districts with local government funding. Scale-out pilots also improved learning outcomes while later pilots took a more technical and political approach to achieving this goal.

The transition from classroom action research in Round 1 to technically-informed pilots on literacy, numeracy and inclusion in Rounds 2 and 3 was an iteration of the model taking a more politically-informed approach that also deepened INOVASI’s impact. INOVASI supported continuing professional development in existing teachers’ working groups (KKG) to develop technical skills and raise awareness among teachers. School supervisors monitored the program while teachers and school heads assessed the learning outcomes. In regions where local government bought into the program it had the greatest impacts, both in terms of scale out and learning outcomes.

Over the four and a half years of Phase I, the INOVASI pilots acted as the proof of concept, demonstrating how to effectively support reform in teaching and learning within the larger system, without taking on a quasi-service delivery role. By building trust and approaching problem solving in a collaborative way, INOVASI became a trusted partner to teachers, schools, government and civil society, and thus fostered positive change. The evidence from our pilot experience became a catalyst for reform in aspects of the system at district, school and classroom levels while TASS developed

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6 The Round 2 pilots that began with problem exploration in 2017 were initially referred to as follows: PELITA (literacy pilot), PERMATA (numeracy pilot), BERSAMA (community participation pilot); SETARA (inclusion pilot); and GEMBIRA (language transition pilot). We subsequently abandoned these titles in favour of more descriptive terms, for example, Literacy 1, Literacy 2.
this same capability in the national policy space. With the two programs being integrated, we are set to realise the full potential of the joint program in Phase II.

### 2.1 Contribution to Program Goal

INOVASI aims to accelerate progress towards improved learning outcomes for Indonesian students by catalysing changes in the system that can benefit students across the country. While Phase I piloted approaches that demonstrably improved learning outcomes in the specific contexts of our partner schools and districts, our broader contribution comes from leveraging the evidence from these pilots to inform policy at the regional and national levels.

We made the most contribution in Phase I when our work aligned with policy areas where there is emerging consensus across actor groups that something needs to change. Aiming to improve Indonesia’s economic productivity in the longer term, government wants to see a shift from a workforce of low and semi skilled labour to an educated workforce that can compete in the knowledge economy at national and international levels. Thus government and civil society were already focusing on basic education and the need to boost students’ performance in literacy and numeracy. Furthermore, our pilot focus areas of community participation, school leadership, mother tongue transition, inclusion and multi-grade learning all feed into the same goal of fully developing the country’s human capital.

Results from the pilots contributed significantly to the program goal and also laid the groundwork for increasing the pace of change in Phase II. However, Indonesia faces a number of geographical, logistical and cultural challenges in improving learning outcomes at scale, relating to the size and make-up of the country and the diversity of languages and cultures. Some communities have deeply embedded beliefs about the process of learning and the roles that schools, teachers and learners should play. Also, gender roles are also still culturally determined in some communities. Furthermore, government may not have the necessary human and other resources to raise awareness, train teachers and advocate for fresh thinking in education across the country.

Nevertheless, during Phase I INOVASI and TASS created opportunities for government and civil society actors to advance the quality education agenda and this process will continue in Phase II. INOVASI’s school and cluster-based pilots had a demonstration effect that allowed us to extend the reach and influence of the program to district and provincial levels. This natural bottom-up progression of the learning through the pilots from schools and school clusters to districts and

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**Box 1: Improved learning outcomes in literacy**

The INOVASI pilots and grant-based partnerships improved students’ basic literacy and comprehension skills and this was demonstrated by the students’ results in the tests. In total 10,917 students (5,260 girls and 5,557 boys) participated in the basic literacy test and 6,150 students (3,292 girls and 2,858 boys) participated in the comprehension test. For basic skills of recognising letters, syllables and words, there was a 20 percentage point increase (from 58 per cent to 78 per cent) or 35 per cent higher than the baseline. For the comprehension test, the average score increased by 11.9 percentage points (from 58.4 to 70.3) or 20 per cent higher compared to the baseline.

The percentage of students who passed the basic literacy test increased in all provinces:

- 31 percentage points increase (or 154 per cent higher compared to the baseline) in NTT;
- 26 percentage points increase (or 56 per cent higher compared to the baseline) in North Kalimantan;
- 20 percentage points increase (or 35 per cent higher compared to the baseline) in NTB;
- 11 percentage points increase (or 15 per cent higher compared to the baseline) in East Java;
- Linking directly to higher-order thinking skills (HOTS), reading comprehension scores increased across all four INOVASI provinces by: 21.3 percentage points in NTT, 14 percentage points in North Kalimantan, 15.7 percentage points in NTB and 7.1 percentage points in East Java.
provinces generates confidence in *alternative ways of doing things*. Thus, the program can help the national government *extend its reach* as it rolls out key policy changes by *feeding information back* to government on how those policy imperatives and changes are being taken up at lower levels of the system. This is the feedback loop where INOVASI becomes a knowledge broker, connecting different actor groups within the system.

This system-level change becomes the focus for INOVASI in Phase II although we will continue to support wider scale out and sustainability of the Phase I outcomes. INOVASI will leverage these outcomes to support Indonesia's efforts to reform policy in key areas, such as curriculum, assessment, teachers’ continuing professional development, teacher training and teacher management.

### 2.2 Progress towards End-of-program Outcomes

INOVASI contributed to the program goal through the three end-of-program outcomes we describe in this section. However, our achievements varied depending on a range of factors across different contexts.

**End-of-program outcome 1: A credible body of evidence is available of what policy and practice changes work to improve student learning outcomes in Indonesia**

Table 1 presents the issues and the evidence emerging from our pilots and related activities on what does and doesn’t work to improve learning outcomes. In the first column we identify and explain the issues and in the second column we assess the relative success of different solutions in local contexts. The evidence is drawn from the pilots and supported by INOVASI and TASS research, as well as by lessons from earlier programs in Indonesia and elsewhere. This evidence is discussed in more detail in section 2.3 and in Annex 7.

**Table 1: What works and what doesn’t work to improve learning outcomes: evidence from INOVASI Phase I**

<table>
<thead>
<tr>
<th>Key areas : Literacy and numeracy</th>
<th>Emerging evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defining the problems</strong></td>
<td></td>
</tr>
<tr>
<td>Learning outcomes across the curriculum are below expectations for many Indonesian students throughout their schooling and this is largely due to their limited foundational skills in literacy and numeracy. This is reflected in students’ relatively low scores, for example, in the Programme for International Student Assessment (PISA) tests. Furthermore, on leaving high school students are not prepared for the world of work: (1) Early grade teachers lack the knowledge and skills to teach basic literacy and numeracy. (2) The curriculum does not include a methodology for teaching literacy in the early grades but teaching reading is not part of the preschool curriculum either. (3) The primary maths curriculum is too abstract and fast-paced which means, for example,</td>
<td>(1) Cluster-based short courses are an effective way of upskilling teachers – and this demonstrably improves learning outcomes. (2) Building a reading culture in schools and communities improves learning outcomes. (3) Providing appropriate books improves learning outcomes. (4) Districts can take the lead and where they do, results are impressive. (5) The most effective way to improve literacy involves multiple stakeholders, multi-source funding, and policy and technical support. (6) Learning outcomes improve most in the regions where education is weakest and learning outcomes are poorest before the intervention.</td>
</tr>
</tbody>
</table>
that teachers and students in the mid-primary classes are still confused about fractions. (4) Teachers and students lack access to appropriate children's books for beginning reading. This may be due to: cumbersome book approval systems; inadequate book supplies to remote areas; limited business models in publishing and book distribution; and lack of awareness of the value of non-textbooks in literacy learning.

<table>
<thead>
<tr>
<th>Key areas : Inclusion</th>
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<tbody>
<tr>
<td><strong>Defining the problems</strong></td>
</tr>
<tr>
<td>(1) Teachers lack the knowledge and skills to accurately identify children with disabilities or learning needs and to integrate these children into mainstream classes.</td>
</tr>
<tr>
<td>(2) Many children entering primary school are not fluent in Bahasa Indonesia, the language of instruction, so they fall behind their peers and typically never catch up.</td>
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<tr>
<td>(3) Girls tend to outperform boys in primary classrooms.</td>
</tr>
<tr>
<td>(4) Women are under-represented in leadership positions in the basic education system.</td>
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<tr>
<td><strong>Emerging evidence</strong></td>
</tr>
</tbody>
</table>

| **What works?** |
| (1) The Student Learning Profile that INOVASI and TASS developed and MoEC piloted is an effective and easy-to-use tool that enables teachers to better identify students’ special needs. |
| (2) Using mother tongue in the early grades and transitioning to Bahasa Indonesia proved to be a successful approach and increased students’ scores more than by just running the regular literacy pilots. |
| (3) INOVASI Phase I identified issues around gender in the classroom and the education system and we plan to address these issues in Phase II. |

| **What doesn’t work?** |
| (1) Enabling teachers to identify disabilities and learning needs is not enough. They need strategies and support to include children with disabilities and special needs in mainstream classes. |
| (2) Expecting teachers to find their own solutions is unrealistic. Teachers need to be given agency and have ownership of solutions that work in their context but they also need technical support and advice to find the best solution. |
| (3) Without strong regulatory support from districts, teachers are reluctant to use local languages in the classroom. |

<table>
<thead>
<tr>
<th>Key areas : Teacher support and leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defining the problems</strong></td>
</tr>
<tr>
<td>(1) For many small primary schools in Indonesia the policy of separate classes and a teacher for each grade is inefficient and unproductive.</td>
</tr>
<tr>
<td><strong>Emerging evidence</strong></td>
</tr>
</tbody>
</table>

| **What works?** |
| (1) Multi-grade teaching is more efficient for teacher deployment and it improved the classroom climate and learning outcomes in pilot schools. |

| **What doesn’t work?** |
| (1) While top-down, centrally-driven cascade training appears to be a practical solution to reaching more teachers, it has not always succeeded in changing practices. |
| (2) Teachers cannot be expected to find their own solutions without technical support and access to a body of professional knowledge. |
| (3) Teachers cannot make and sustain changes in their teaching practices without corresponding changes to the curriculum and assessment processes to support them. |
(2) Teachers’ working groups are typically underused as a forum for continuing professional development.
(3) Principals and supervisors need to strengthen their leadership skills but MoEC’s leadership training centre in Central Java is unable to meet the demand.
(4) Districts lack the credible data they need on learning outcomes to develop new policies.

(2) Leadership training for principals works well when linked to specific learning objectives, such as improving literacy.
(3) Short-course style continuing professional development works well in teachers’ working groups when facilitators are well prepared and the training focuses on identified district priorities, such as literacy or numeracy.
(4) Results from credible assessment processes can be used to create awareness of the need for improvement and to drive policy reforms.

What doesn’t work?
(1) If regulations are not accompanied by a practical implementation plan and supported with resources, they are unlikely to make a difference.

End-of-program outcome 2: Decision makers have access to and use this evidence to facilitate and implement more effective education reforms

The evidence INOVASI generated was communicated to decision makers strategically to support the reform process through various channels:

- Targeted policy products, such as the emerging evidence document (INOVASI, 2018),7 policy briefs and presentations in public forums (policy consultations and Temu INOVASI events) at national and sub-national levels;
- Thematic studies published in the final months of Phase I and appended to this report, will be summarised and packaged as policy briefs for decision makers;
- Small meetings and one-on-one consultations with senior government officials and ministerial advisors, through audiences, meetings and online communications (WhatsApp, email);
- Curated joint-monitoring visits for national officials to see the evidence of improved practices in schools and districts firsthand and to directly consult with practitioners and local officials;
- Broader communication platforms, including through the INOVASI website, Facebook and WhatsApp groups, and regular provincial newsletters.

Box 2: Key national policy outcomes

Key national policy outcomes

- The national curriculum and book centre reviewed non-textbooks for early grades and included early childhood education reading books in the approved list, enabling schools to purchase them using schools operational funds (BOS).
- MoEC adopted the tool for identifying special needs (profile belajar siswa) and piloted it in 34 provinces.
- MoRA is adopting INOVASI modules on literacy and inclusion for its continuing professional development program, financed by a World Bank loan.
- MoEC incorporated INOVASI modules on literacy and numeracy into its continuing professional development (CPD) program. This program was subsequently superseded by MoEC’s new grants program, Program Organisasi Penggerak, which is modelled on INOVASI’s grant partnership program.
- MoEC’s Program Organisasi Penggerak is adopting a PDIA approach, specifically for programs that need to prove their effectiveness prior to adoption.

7 This is an internal document that was the basis for consultations and presentations with MoEC and the subsequent series of policy briefs co-published with MoEC’s education policy research centre.
INOVASI’s Communications Strategy was instrumental in achieving the broad reach of the program. Evaluating this strategy will be a priority early in Phase II to assess its success in influencing policy and behaviour change, and to update the strategy for Phase II.

In Phase II we will collate the key findings from Phase I and make them available in an accessible format and location after some consideration and consultation. A common criticism of donor studies is that the findings are not easily available to decision-makers and stakeholders once the project is completed. With an increasing sense of partnership and ownership of INOVASI within MoEC, finding a sustainable solution to this problem will be a priority in Phase II.
End-of-program outcome 3: The effective policy and practice changes identified are reflected in Indonesian government (district, provincial, national) policies, regulations, budgets and plans

In Phase I, INOVASI facilitated policy dialogues that resulted in 51 regulations at village, district and provincial levels. In addition, INOVASI’s work in collaboration with TASS resulted in five significant national policies and programs. INOVASI works closely with MoEC’s policy research, curriculum and assessment centres and the Directorate General for Education Personnel and Phase II will focus increasingly on this area.

- At district and provincial level, INOVASI’s inputs (pilots, research and policy work) can be linked directly with the policy outcomes (new regulations). In East Nusa Tenggara, INOVASI and TASS worked together on a province-wide ‘grand design’ to improve learning outcomes, especially in literacy, numeracy and character education.

- The impact on INOVASI’s partner districts is evident in their annual budgets that now emphasise programs to improve learning outcomes, including by scaling out successful pilots. This emerged from an analysis of education finance patterns in the districts and by tracking trends in funding over the last three years. Key findings are described in Box 3.

- At national level, the impact of INOVASI’s policy work is less linear but in some ways more significant. This is due to the complex policy environment and the role played by multiple stakeholders – including other DFAT-funded programs such as ID-TEMAN, KOMPAK, UNICEF and RISE. INOVASI worked closely with TASS to leverage the outcomes and networks of the two programs.

In brief, the policy impacts at national and sub-national levels are as follows:

1. **Literacy and numeracy**: Using assessment results to highlight the low literacy and numeracy levels among local children effectively leveraged policy support in INOVASI partner districts and at provincial level in East Nusa Tenggara. The aim was to create a ‘sense of crisis’ to stimulate political support for ‘doing things differently’ around literacy in early grades.

2. **Book supplies**: INOVASI worked with MoEC’s curriculum and book centre, non-government agencies and the publishing industry to improve book supplies – including to remote areas, such as North Kalimantan. We engaged with Indonesia’s national publishing industry body, representing firms like Gramedia and Airlangga, and partnered with the Asia Foundation to provide free-download digital children’s books. We also partnered with the Pen Circle Forum (Forum Lingkar Pena) to provide inclusive books, using pictorial sign language. As a result of this ongoing engagement, the ministry’s book centre amended its policy on books for primary

Box 3: District education finance analysis

District education finance analysis (INOVA 2020)

The analysis of INOVASI districts’ budgets found that they are beginning to allocate funds to improve education quality. This includes funding for continuing professional development programs, book provision, school supervision and implementation of programs for language transition, numeracy, multi-grade and disability inclusion.

- Nationally, the trends in allocations for quality improvement are positive (more than 50 per cent increase);
- Seven of the 15 districts studied show positive trends;
- Four of the eight districts that reduced the budget still allocated more than 10 per cent to quality improvement;
- However quality improvement is still not the top priority for education spending;
- Employee expenditure is still the biggest and decisive budget item (district spending on salaries varied from around 60 per cent to 90 per cent of their education budget);
- Any reduction in the budget means that spending on quality is sacrificed first.
schools and agreed to review the content of children’s workbooks and teachers’ guides for literacy and numeracy.

3. **Curriculum review**: Government began a review of the national curriculum in 2019 and INOVASI and TASS supported this process by providing specialised advisors and feedback from INOVASI’s literacy and numeracy pilots. INOVASI will therefore have the opportunity to leverage relevant evidence from the pilots and research activities to contribute to this ongoing process in Phase II.

4. **Inclusion**: Central Lombok embraced inclusive education, making it a significant policy platform. The Student Learning Profile, was initially developed for Central Lombok’s pilot but MoEC (supported by TASS and INOVASI) then piloted the tool in inclusive schools nationwide and the application is subsequently being refined. The next step is to develop a guidebook for teachers on integrating children with identified special needs in regular classes. This is significant because interest is now evident up to the national level.

5. **Continuing professional development**: Cluster-based continuing professional development is a priority for both MoEC and MoRA. Both ministries have approved the training modules INOVASI designed and teachers are now credited for attending the sessions, contributing to their career advancement. Districts have adopted the approach and are scaling it out. INOVASI has also started to adapt traditional training modules for online and remote delivery.

6. **Partnerships with non-government organisations**: INOVASI is working closely with MoEC on its new Program Organisasi Penggerak that will give small grants to several hundred non-government partners to provide continuing professional development to teachers across the country. This program is modelled on INOVASI’s grant-based partnership program and INOVASI is helping the ministry to design and implement it.

7. **Problem-driven iterative adaptation (PDIA) as an approach**: Based on how INOVASI has been working, MoEC is also adopting a PDIA approach specifically for its large-scale Program Organisasi Penggerak that is still at its inception stage.

8. **Multi-grade learning**: With no tradition of using multi-grade classes, introducing this approach in Indonesia is likely to be challenging. It is expensive initially as teachers need incentives and training, parents and teachers need persuading, and local district officials must learn to manage the more complicated system. Nonetheless, MoEC is considering the multi-grade approach as part of its new strategic plan and the personnel director for the madrasah wants to include it in MoRA’s continuing professional development program. Teachers in small schools already end up teaching students in different school years at the same time but without the official support and expertise that can turn this into an advantage.

9. **Assessment**: INOVASI has maintained strong links to MoEC’s national assessment centre under the research and development body and one of government’s emerging priorities is to routinely use assessments at the classroom level to drive planning at the national policy level. Participating in international benchmarking tests, such as PISA, Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS) has highlighted the need to improve learning outcomes – and develop credible measures of progress. TASS and INOVASI both worked with MoEC on developing and piloting the Indonesian students’ performance assessment (AKSI, now AKM) approach. INOVASI also helped pilot the effective use of formative assessment in classrooms, schools and districts to inform practice and policy.
2.3 The Evidence Base: What’s Working?

Phase I of INOVASI sought to find out what works to improve learning outcomes – and to use this evidence to inform policy. This section summarises and discusses the findings under INOVASI’s three areas of investigation, based primarily on results from the comprehensive baseline and endline studies, using INOVASI’s education and learning survey, SIPPI (Survei Inovasi Pendidikan dan Pembelajaran Indonesia).

The results are aggregated from the three rounds of INOVASI-led and grant-funded pilots without considering variations across pilots or the diversity of approach, context or performance. In this aggregation, 380 out of 746 schools (51 per cent) and 1,078 out of 2,238 teachers (48 per cent) benefitting from INOVASI support were randomly selected for the baseline and endline surveys. With 95 per cent confidence level and 5 per cent margin of error, the samples were sufficient to represent program-level results. The analysis includes before and after comparisons (baseline–endline surveys), correlation analyses and monitoring data derived from the spot checks. The spot checks consisted of classroom observations, surveys and interviews.

Further details on the results are available in Annex 7 and in the thematic studies that bring together evidence from all the pilots in the key areas of literacy, numeracy, disability inclusion, gender, continuing professional development and sustainability, the PDIA approach, and partnerships. See Annex 1 for abstracts of these studies.

THE QUALITY OF TEACHING IN THE CLASSROOM

Student-centred teaching

One issue that affects the quality of teaching in the classroom is whether and how much the teacher uses student-centred approaches. These include, for example, using open-ended questions, delving into students’ opinions, using appropriate teaching tools, recognising students’ efforts and having well-balanced interactions with students in the front, middle and back of the classroom. These contrast with teacher-centred practices that rely on reading exercises, repeating or memorising and copying from the blackboard, with lessons typically focusing on textbooks and teachers explaining in one-way communication. Teachers who participated in the INOVASI pilots are clearly shifting towards student-centred approaches with students actively participating in the learning. Evidence of this shift was drawn from teacher interviews and classroom observations. Furthermore,
the literacy thematic study (Fearnley-Sander 2020) investigated outcomes from 25 pilots on teacher improvement and books, and concluded that most participating teachers changed their practices and adopted ‘critical elements for teaching reading’.

**Teacher interviews:** Most teachers (68 per cent) in the baseline interviews acknowledged that their style of teaching was teacher-centred and dominated by lecturing. Following the interventions, the percentage of teachers who said they used student-centred approaches increased from 32 per cent to 45 per cent. The use of discussions, question-and-answer sessions and debates had increased by the endline although lecturing remained dominant.

**Classroom observations:** Positive changes in classroom teaching practice were evident during the observations and these are shown in figure 2.

**Figure 2: Changes in teaching practices: baseline–endline results**

![Figure 2](image)

‘Literate’ classrooms

Another key issue in the quality of teaching is whether students are learning in ‘literate classrooms’. SIPPI describes these as ‘print-rich’ classrooms that have books, reading corners and classroom displays of learning materials and the students’ own work. Following the pilots, more classrooms were in this category. Teachers used the walls for displays and in language transition classrooms both local languages and Bahasa Indonesia materials were included. This exposes children to literacy materials in their day-to-day activities.

- The percentage of teachers displaying students’ work increased by 26 points, from 45 per cent to 71 per cent.
- The percentage of teachers displaying teaching/learning materials or aids increased by 15 points from 69 per cent to 84 per cent.
- More teachers have set up reading corners in their classrooms that include non-textbook readers and children’s literature, with a 23 point increase from 24 per cent to 47 per cent.

A similar trend was found in INOVASI’s first round of technical literacy pilots and in the partnership pilots, with the results doubling (from 23 per cent to 55 per cent and from 22 per cent to 44 per cent)

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8 A summary of this study is available in Annex 1 of this document
respectively). The format and standard of the reading corners varied across schools and areas as some appeared to be well-organised, with small areas set up interestingly for comfortable reading, while others were just basic facilities to keep books. Some schools allocated books for inside and outside the classroom to allow students easier access to books. Regardless of the variations, the reading corners mean that students now have more access to books.

**Numeracy teaching**

INOVASI conducted two rounds of pilots on numeracy in six districts. An analysis of results in the thematic study on numeracy (van der Heijden 2020) found that participating teachers improved their own understanding of the mathematical content and pedagogy needed to support children’s understanding of basic numeracy concepts. The quality of their knowledge and skills in teaching numeracy also improved. This, in turn, led to students improving their conceptual knowledge and understanding of number, as well as their ability to demonstrate their reasoning and apply their knowledge (see section 2.5).

Aside from the quantitative results from the baseline and endline surveys, the numeracy study used a teacher practice index based on the SIPPI indicators in the observations and interviews and the results suggest that a change in pedagogy had an impact on students’ thinking and reasoning abilities (van der Heijden 2020, 20). Teachers used relevant concrete and visual materials effectively to scaffold students’ understanding towards more abstract concepts. They asked students more open-ended questions, although students needed more exposure and experience in explaining the processes and thinking about how they arrived at a solution. Teachers also took a student-centred approach in organising their students into groups based on their pre-assessment data.

Furthermore, the numeracy study showed that after the pilot, teachers developed more confidence in their students’ ability to understand the subject and more students said they considered numeracy their favourite subject. Teachers who have a growth mindset tend to be more effective in building their students’ confidence in learning, a key element in improving the quality of learning and teaching (Dweck, 2008).

**THE QUALITY OF SUPPORT FOR TEACHERS**

In investigating the quality of support for teachers, INOVASI focused on the following key issues: continuing professional development and teachers’ working groups; school leadership; and book provision.

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9 A summary of this study is available in Annex 1 of this document.
Throughout the years from 2016 to 2020, the Ministry of Education and Culture conducted teachers' working groups and continuing professional development activities to improve the quality of teachers, principals, and supervisors through the working group cluster system (INOVASI, July 2019) and by issuing standards and operating procedures to support these groups (Ministry of National Education, 2008, 2010). However, INOVASI's study on working groups in five districts in West Nusa Tenggara province (INOVASI, June 2019) found that as a forum for improving the quality of teachers, principals, and supervisors, the working groups are not yet functioning optimally. At this stage, the study reported that: ‘Some working groups offer professional development through training and other activities but this is still not common and administrative tasks or lesson planning dominate.’ Recognising the challenge that the government faced in ensuring that the working groups fulfilled their remit, INOVASI resolved to contribute to this process through its pilot program.

INOVASI's Round 2 and 3 pilots in 2018–2019 included support for teachers and principals through continuing professional development delivered through the working groups as well as through follow-up mentoring activities. Data from these two pilot rounds show that more teachers participated in training for teachers (excluding INOVASI training) with a 10 percentage point increase from 62 per cent to 72 per cent. In the last year of the program, more teachers participated in continuing professional development activities in teachers' working groups with a 32 percentage point increase from 43 per cent to 75 per cent.

As a result of continuing professional development activities in the teachers' working groups, some teachers reported that they improved their lesson planning by analysing their students’ ability, considering teaching techniques targeted at their learning levels and including learning media. While the increases were small (from 81 per cent to 83 per cent), they were more obvious for teachers incorporating newly-introduced active teaching approaches and media in lesson plans (11 points).

**School leadership**

INOVASI ran two leadership pilots (Batu City and West Sumba) in Phase I and this is a potential area of focus in Phase II. Monitoring data record that more principals ran professional development sessions in their schools (known as ‘mini KKG’) as a result of the program with increases of 39 and 25 percentage points for Batu City and West Sumba respectively. However, no significant improvement was reported in principals’ instructional leadership. This is an area that potentially drives better teaching practices.

The number of principals supporting teachers by ensuring they have learning materials also differed in the two pilots with the number in Batu City decreasing by 15 percentage points and the number in West Sumba increasing by 67 percentage points. The starting point was lower in West Sumba compared to in Batu City but other variables confirmed that the pilot had limited influence on managerial decisions to support teachers for quality learning. Nevertheless, spot-check data showed that principals who took part in the leadership pilots were more likely than their counterparts to allocate the schools operational (BOS) funds to support literacy and numeracy.
A key finding from the pilots is that combining leadership training for principals with the literacy and numeracy training for teachers resulted in better learning outcomes than running the literacy and numeracy pilots on their own. For instance, the results from a numeracy pilot that was combined with a leadership pilot and a numeracy pilot without the leadership program were 84 per cent and 32 per cent respectively for better learning outcomes. A similar trend was evident for other types of technical pilots. Overall for both literacy and numeracy pilots, the results for better learning outcomes were more than double when the leadership pilot was included (76 per cent for any pilot plus leadership versus 34 per cent for any pilot without leadership).

**Book provision**

INOVASI partnered with several non-government organisations and private companies’ corporate social responsibility programs to improve book supply in schools and communities, as a critical element in improving reading (Fearnley-Sander 2020). This was evident especially in North Kalimantan, where Litara, the One Person, One Book program (OPOB) and the Asia Foundation (digital books) worked with the district and local communities to improve access to appropriate children’s books. The district provided local funding for schools and set up a working group to approve books. In the four Sumba districts, Rainbow Reading Gardens (Taman Baca Pelangi), a non-governmental organisation, established demonstration school libraries.

‘Two of the book pilots combined book supply with teacher development. In Central Lombok, the Pen Circle Forum (Forum Lingkar Pena) developed books to support inclusive teaching, designing books with sign language and modelling inclusion though the diversity of characters included in the stories. In two districts of Sumba, the Indonesian Children’s Literature Foundation (Yayasan Literasi Anak Indonesia – YLAI) provided a sample of balanced literacy teaching through the number of graded readers it has developed. It also modelled the shared and guided reading methodologies that enable teachers to put books at the centre of basic skills development and comprehension in reading’ (Fearnley-Sander 2020, 24).

**LEARNING FOR ALL**

Certain groups of children can be excluded from learning, including: children who are not yet fluent in Bahasa Indonesia, the language of instruction; children with disabilities; children living in remote areas; and boys or girls who are excluded from aspects of learning due to gender. INOVASI took a twin-track approach to exploring the issues and piloting solutions for inclusion: mainstreaming and targeting individuals and groups potentially at risk. Key elements of this strategy included:

- Improving how teachers identify and teach children with disabilities;
- Investing in basic literacy for the many children who do not speak Bahasa Indonesia at home (language transition pilots);
- Identifying innovations that improve teaching and learning in schools in remote areas;
• Exploring issues around gender equality and women’s empowerment (Gibson and Purba 2020).\textsuperscript{10}

Disability inclusion

In Phase I INOVASI conducted three pilots and three grant-funded partnerships that focused on disability-inclusive education. The studies explored the problems, developed and tested the Student Learning Profile and undertook an extensive multi-stakeholder policy analysis and development process to prepare the Central Lombok Regency Inclusive Education Roadmap (2019–2021). A thematic study on disability inclusion (Sprunt 2020)\textsuperscript{11} draws together the evidence from this work.

The study found improvements in learning outcomes among students with disabilities in the INOVASI pilot schools and highlighted the value of strengthening disability data systems and policy tools to enable inclusive education.

INOVASI conducted inclusion pilots in Central Lombok, Sidoarjo and East Sumba. As a result, in these districts, children with disabilities had more opportunity to enrol in regular schools. Villages also initiated support to assist families with special needs children. In Central Lombok, teachers in partner schools learned to use the Student Learning Profile to identify students with specific learning problems. The teachers then prepared individualised lesson plans for these students. Spot-check data from the inclusion pilot showed, for instance, that 86 per cent of teachers with children with disabilities in their classes reported they used the profile to identify specific conditions that affect learning for their students. However, 68 per cent said that they still need further coaching in using the profile and developing appropriate lesson plans while 18 per cent reported that they lacked specific support for students with disabilities. Thus, more work is needed to ensure quality learning for children with disabilities.

Differentiated learning and gender inclusion

Aside from the targeted disability inclusion pilots, the other pilots also generally promoted learning for all. Teachers participating in the pilots learned to assess students’ learning skills and support those in need through differentiated learning, additional sessions, different tasks or assignments and grouping children with similar levels of learning ability. Except where indicated, the following results are aggregated from the Phase I Rounds 2 and 3 pilots and grant-based partnerships:

\textsuperscript{10} A summary of this study is available in Annex 1 of this document.

\textsuperscript{11} A summary of this study is available in Annex 1 of this document.
In language transition pilots, the student learning outcome gaps between children who speak a local language and those who speak Bahasa Indonesia were reduced, although results varied across the three language transition pilots.12

Studies have revealed that students from families with low socio-economic status are behind in their reading levels and have limited interest (Van Vechten 2013; Aikens and Barbarin 2008). The endline study of INOVASI pilots shows the gap is closing between students from low and high quantiles of the socio-economic index and the difference came down from 47 to 30 points on the endline basic literacy test.13

In the multi-grade pilot, test scores in Probolinggo in East Java increased the most among the five districts involved while on the baseline the students’ performance was the lowest across these pilots. The scores increased by 18 points from 62 per cent to 80 per cent (the provincial range is 10 to 18 points) or, as a proportion, by around 28 per cent (the provincial range is 13 per cent to 28 per cent). Nevertheless, the score remained the lowest at 80 per cent compared to 98 per cent in Batu City. The trend was similar for the average score in the literacy comprehension test although the gaps were small.

INOVASI’s literacy and numeracy tests, disaggregated by gender, show that girls consistently outperformed boys. This was true in the baseline and the endline tests, and across the four provinces. The gender gap, however, was smaller by the endline. While the pilots did not specifically target boys or aim to close the gap, this effect is likely the result of teachers using more effective practices that engaged both boys and girls. At baseline, for example, the gap for literacy ranged from 8 to 13 points across provinces. By endline, the gap in all provinces ranged from 2 to 11 points for INOVASI’s first round of pilots. For all pilots, including grant-funded partnership pilots, the gap ranged from 5 to 20 points.14

The disability inclusion thematic study (Sprunt 2020) highlights areas where the program can be strengthened in Phase II. This includes: proactively using and strengthening the work of disabled peoples’ organisations and disability service units in supporting inclusive schools; designing pilots with a broader focus than just teacher capacity development, to address the issue of most children with disabilities being out of school; building the capacity and commitment of principals and supervisors to ensure accessible infrastructure, adequate resources and greater support for teachers; and addressing the system and teaching capacity required to implement assessments inclusively.

In Phase II we will build on the findings from Phase I and deepen our work on gender equality by taking action to:

- Involve a full-time gender specialist from the beginning of Phase II (to ensure pilot designs and policy work take account of gender from the outset);
- Include gender-focused activities and events in the workplan and dedicate a realistic budget to support these activities;

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12 Four pilots focused on language transition: Bima, Dompu, East Sumba and West Sumba. The East Sumba pilot, implemented by Sulina, and INOVASI’s pilot (GEMBIRA) in Bima both closed the gap between children who speak local languages and those who speak Bahasa Indonesia. The gap reduced by 4 and 7 points respectively. Results were stronger for the GEMBIRA pilot in Bima that reduced the gap seven times more than the pilot in Dompu where the gap decreased only by 1 point. The West Sumba pilot, run by SIL, did not produce the expected result. This may be because the intervention needed longer to generate results or there may be other technical reasons that require further verification.

13 Note that this measure is from Round 2 (the first round of short-course pilots).

14 The gap increased in East Nusa Tenggara. This result may be due to a greater gap between girls and boys in one of the grantee pilots for language transition teaching.
• Seek out allies in government and civil society who can help us make wise choices about how we engage on gender;
• Explore the feasibility of designing and delivering a gender-focused pilot (grant, short-course or other) in Phase II;
• Strengthen the school leadership pilot to improve leadership and management skills for all principals and to promote women’s empowerment;
• Consider the potential for character education to provide opportunities for children to practise values of equality, respect and teamwork – these can and should include a gender dimension (Gibson and Purba 2020).

2.4 Snapshot of Findings from Pilots and Provinces: Literacy

INOVASI conducted a thematic study to analyse the results of all its Phase I pilots that explored ways to improve literacy outcomes (Fearnley-Sander 2020). The main finding from the pilots and the study is that student outcomes improved in the pilot schools – more than could be explained by natural growth. This finding was echoed in the other thematic studies for numeracy, disability inclusion, partnerships and continuing professional development.

Other key findings on what worked to improve literacy can be classified into the elements that helped mitigate disadvantages in particular contexts. The commitment to literacy development of most district governments was a critical element. A pattern that emerged throughout all findings was that the most disadvantaged districts made the most gains and thus, with support from the intervention, they were able to quickly close the gap with the more advantaged districts. A related finding was that outcomes from pilots adapted to target specific contextual difficulties, such as language of instruction or access to books, outstripped results from the mainstream approaches to improving teachers’ know-how in teaching reading.

Such findings have implications for future strategies to maintain and extend the gains in literacy. The short duration of the pilots means that while the shift towards student-centred teaching practices has been remarkable, a permanent paradigm shift is not yet guaranteed.

The following results are aggregated from Rounds 1 and 2 pilots and grant-based partnerships.

LITERACY – BASIC DECODING AND COMPREHENSION SKILLS

The percentage of students passing the basic literacy test in the baseline ranged widely across the four provinces. East Java had the largest proportion of students passing the test at 82 per cent while East Nusa Tenggara had the smallest proportion at 23 per cent. Half the students passed the test in North Kalimantan and 57 per cent passed in West Nusa Tenggara.

Following the pilots, East Java still had the highest proportion of students passing the test and while East Nusa Tenggara still had the lowest, it had improved the most with an increase of 31 percentage points. This was followed by North Kalimantan (28 points), West Nusa Tenggara (20 points) and East Java (11 points). In terms of percentage increase, East Nusa Tenggara improved by more than double (134 per cent increase), while East Java improved by just 13 per cent since the pass rate there was already high.
While the performance was generally strong in grade three, about 11 per cent of the 3,414 grade three students failed the basic test. For the most basic component of letter recognition, 4 per cent of grade three students (about 137 students) still struggled. East Nusa Tenggara had the highest percentage of grade three children who failed at 8 per cent while no grade three students failed in North Kalimantan.

The average score on the comprehension test improved by 11.9 percentage points across the pilots (from 58.4 to 70.3). East Java had the highest scores and East Nusa Tenggara had the lowest in both the baseline and endline tests. However, East Nusa Tenggara had the greatest increase that was three times that in East Java (21 points versus 7 points). Most students passed the test on explicitly-stated information and making straightforward inferences but were weak on interpreting and integrating ideas. This was the most challenging part of the test and average scores were below 50 in both baseline and endline tests, with the lowest levels of improvement.

The impact of the pilots when they are funded and implemented by the districts will be investigated in Phase II. In a case study of seven schools in North Kalimantan that participated in the scaled-out literacy pilot, the percentage of students who passed the basic literacy test improved from 68 to 80 per cent (an increase of 12 percentage points) while students participating in the original INOVASI pilot improved by 28 points. These results need further investigation and should not be considered conclusive given the small size of the study and the number of variables. The results indicate that the scale-out activities improved literacy skills in Bulungan and the program reached more than 100 schools with less technical support than the original pilot.

**WHICH LITERACY PILOTS WERE MOST EFFECTIVE AND WHY?**

The literacy thematic study (Fearnley-Sanders 2020) analysed results from the Literacy 1 and 2 pilots, INOVASI's major experiment in literacy teaching development.
As illustrated in table 2, results on the different component skills in some provinces, notably East Nusa Tenggara and North Kalimantan, reveal larger effects than those at the aggregated basic literacy test level. These findings are valuable diagnostically and show, for example, the low level of word recognition among grade one students in Sumba compared with the other provinces. The gains in that case also show the capacity of the program to overcome these key inhibitors to reading progress. Word recognition also lags behind the other foundational skills in most provinces but conspicuously in Sumba. This may point to language of instruction and vocabulary problems that are not fully recognised in early grades literacy methodologies. This suggests that phonological approaches are not enough to overcome these issues on their own.

Overall, the findings also showed that the considerable variability in the extent of effect across the provinces relates to their different baseline levels and the pattern of the lower the baseline, the higher the gain was sustained.

The pilots were effective in improving comprehension skills — showing more gains than in the component skills — and particularly in the higher-order thinking skill of inferencing. This attests to the value of the balanced literacy approach adopted in the Literacy 1 and 2 pilots. East Java in particular improved more in comprehension skills than in component skills, suggesting that the emphasis needs to be on developing teaching methods in higher order skills rather than in beginning reading skills. Teaching methods in the component skills already seem to be adequate in the province.

The extent to which a disadvantaged region such as Sumba closed the gap with other provinces in comprehension indicates that higher-order thinking is accessible to students even if their basic reading skills are limited. Another important finding is that Sumba leads the other provinces in the gains on listening comprehension, indicating the districts recognise the value of teaching methodologies that strengthen second language learners’ understanding.
Nevertheless, the performance on comprehension, particularly in disadvantaged provinces, should not conceal the scale of the problem of reading poverty, represented by the small proportion of children in the Literacy 1 and 2’s catchment areas that proved eligible for the comprehension tests.

### 2.5 Snapshot of Findings from Pilots and Provinces: Numeracy

The following results are aggregated from the Rounds 2 and 3 pilots (Numeracy 1 and Numeracy 2) and grant-based partnerships conducted in Sumbawa and East Java. Average scores for the numeracy comprehension test improved by 14 percentage points (from 54.7 to 68.8), consistent with literacy across provinces, while East Java had the highest average scores on the numeracy comprehension test and East Nusa Tenggara had the lowest. The gap between the two was 18 percentage points.

INOVASI’s Numeracy 1 and 2 pilots improved students’ knowledge and, significantly, its application. This suggests that the improved pedagogy is having an overall impact on student learning. Boys still performed slightly below girls but gains were evident, particularly among the boys. With a more student-centred approach, students were enjoying the subject and had more positive perceptions of it.

Teachers who took part in the teachers’ working group sessions improved in most areas of their teaching practice and this affected students’ progress positively. Teachers became more knowledgeable about early numeracy teaching, especially considering their mediocre scores in the baseline SIPPI teacher test. However, they need to learn more about how to scaffold and support students’ responses and give feedback on learning.

Following the pilot, teachers arranged their classes in groups to support student-centred approaches, explained the learning objective at the outset and asked the students more questions. This is a tangible shift from a didactic teacher-centred approach. The teachers’ own expanded knowledge and use of numeracy content and processes also demonstrates their growth mindset towards learning new content and methods.

The thematic study on numeracy (van der Heijden 2020) provides evidence that more time and emphasis should be given for teachers to focus on early conceptual knowledge, skills and understanding in the early-grades curriculum. This will ensure a solid basis for more abstract learning later on.

Prior to the pilot, the teachers were not using specific methods to develop a solid understanding of number and students did not have adequate time to practise and explore number concepts. The training in the teachers’ working group meetings means teachers can continue to learn with and from their colleagues and develop effective teaching practices. Differentiated training for teachers and principals would also create awareness and support for new approaches.

Aside from effective methods, teachers need manageable teaching and learning materials that fit the context as well as the students’ varying levels and learning needs. They also need to conduct regular and varied assessments to gain insights into any difficulties or misconceptions the students may have so they can better organise their classes to meet individual, group and whole-class learning needs.

In Phase II the districts have requested support with improving numeracy in the upper primary grades.
WHICH NUMERACY PILOTS WERE MOST EFFECTIVE?

Differing conditions and timing for the baseline–endline studies make it difficult to compare outcomes of the two numeracy pilots (van der Heijden 2020). The overall average score in each of the numeracy learning outcomes increased in both districts after the Numeracy 1 was implemented. In Sidoarjo, the overall baseline score improved from 69 per cent to 78 per cent. In Sumbawa the gains were greater, with an average baseline score of 51 per cent and an endline score of 71 per cent. For Numeracy 2, there were only three months between the baseline and endline student learning assessments, making it difficult to make claims about the impact of the pilot on students' learning improvements. The key is to establish if students progressed in number (content) as well as in applying that knowledge and in developing their reasoning skills (cognitive).

The results of the Numeracy 2 baseline numeracy test look slightly different from the Numeracy 1 results where almost all students achieved a mean score of 97–100 per cent. In Numeracy 2, the grade one students’ starting point was lower on recognising numerals (91 per cent) and this may indicate a lower ability in reading, less previous exposure and the timing of the survey (after just one semester in school). The additional districts in the Numeracy 2 cohort are also lower than Sidoarjo and Sumbawa in terms of socio-economic status. Boys' scores were lower than girls' scores in both pilots but both made similar progress, although number discrimination remains an issue. This ability to understand quantities of numbers is essential and affects other areas of mathematical development.

2.6 The Grant-based Partnerships Pilots

The grant-based partnership program overall generated students’ interest in reading and developed their literacy skills. In schools participating, the percentage of students who passed the basic literacy test improved by 18 points, from 60 per cent to 78 per cent. The grantees achieved this by collaborating with schools to provide libraries and working with community reading centres. For instance, in Central Sumba, the number of students who said they enjoyed reading rose by 42 percentage points, from 53 to 95 per cent, and in other Sumba districts this rose to 100 per cent. Each pilot was designed to deliver specific results, such as promoting better access for special needs children, increasing parents’ engagement and training teachers in literacy and numeracy.

Some grantee pilot programs also faced challenges, for example, in coordinating with government and sustaining the intervention, while others established good relationships with local government and will collaborate further. However, most grantee programs are not yet at this stage. The relatively short implementation period made it difficult for local government to adopt the pilot approaches.

The grant-based partnership program cost around IDR28 billion for 22 grantees, including the costs of grantees’ training and socialisation workshops. This is equivalent to around 16.5 per cent of the total INOVASI program activity estimated spending in Phase 1 of around IDR170 billion. The costs

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15 This occurred due to external conditions around program budget changes, timing of the school year and Ramadan.

16 Excluding the Literacy Boost pilot, run by Save the Children, as this pilot was implemented in a different pattern of partnership.
per school varied, ranging from about IDR27 million to IDR165 million. The two with the lowest costs were NU Ma’arif and Pen Circle Forum while the programs with the highest costs were the Summer Institute of Languages (SIL) and Rainbow Reading Gardens.

Nevertheless, the Rainbow Reading Gardens pilots, for example, provided many books and increased interest in and access to reading, contributing to better literacy skills. The Muhammadiyah and NU Ma’arif pilots both improved literacy in terms of basic skills and comprehension, with increases in the test results of 1 and 3 points respectively for basic skills and about 2 points and 10 points respectively for comprehension. The Muhammadiyah pilot schools were within the top 20 per cent of INOVASI’s school quality index, so the starting point was higher and the outcomes were less dramatic – a pattern observed across the pilots. Results from the NU Ma’arif numeracy pilot, however, are still to be proven.

The Muhammadiyah and NU Ma’arif results reflect a number of realities, including differing approaches to managing the organisations and the pilots within them, different starting points in terms of general school quality and a late start for activities in both partnerships. However, these organisations’ enthusiasm and commitment in the first round of grant-based partnership activities provide a sound base to build on in Phase II.

A thematic study on partnerships (Amalia, Arsendy and Purba 2020) analyses the outcomes and lessons learned from the grant-based partnership program in more detail. The study found that while the grant-funded partnership programs generated positive results, measured in changing practices and improved learning outcomes, the challenges related to program design and sustainability persist. One main challenge was the short duration of these pilot programs, giving the government, facilitators and beneficiaries little time to build their capacity to independently apply and sustain the changes after the program. Other challenges arose from: varying levels of competence and commitment among participants and implementers; limited supporting regulations at the school, office and village levels; and inconsistent support from principals and local governments. Phase II provides an opportunity for follow-up monitoring to assess the sustainability of outcomes from these partnerships and determine the factors associated with their effects and sustainability. This evidence is valuable for MoEC in planning its large-scale partnership, Program Organisasi Penggerak.

2.7 Cost-benefit Analysis

We conducted a simple cost–benefit analysis of the Indonesian and Australian governments’ investment in the INOVASI program although these preliminary findings warrant further analysis for conclusive insights. We found that it costs more to achieve basic literacy and comprehension skills in districts where most children failed the basic literacy test than in better-served districts (see figure 4). For example, the cost per student to increase literacy comprehension test scores by 1 point was about AUD57 in Central Sumba, 50 times more than the cost in Batu City (approximately AUD1). However, as reported, gains in the more disadvantaged districts where more children failed the basic literacy test in the baseline are much larger than in the better-served and higher-performing districts.

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17 In Phase 2, we will explore methodologies for analysing unit cost and cost benefit for a range of interventions. This has not been possible with the data available for Phase I. Each pilot and grantee program worked differently with schools on different interventions over different timeframes so there was no common basis for comparison. However, the grants program overall represents 16.9 per cent of the INOVASI budget.

18 A summary of this study is available in Annex 1 of this document.
A regression analysis found that a 1 per cent increase in the proportion of students passing the basic literacy test would reduce the cost of a one-point increase in literacy comprehension test scores by AUD0.62. The endline results from the pilots reveal that students whose teachers took part in the pilots were 20 percentage points more likely to pass the basic literacy test than others. This means that districts that invest in scaling out INOVASI pilot interventions are projected to save an average of AUD13.2 per student to increase their literacy comprehension score by one point.

Figure 4: Regression analysis – the cost of delaying basic literacy skills

One finding that emerged clearly from our work in Phase I is that a one-size-fits-all approach does not work. Remote and disadvantaged regions need different support and INOVASI’s Phase I modules are generally more appropriate for these regions. For example, as shown in figure 5, literacy pilots in East Nusa Tenggara increased scores on basic literacy by 2.5 times, while the increase was modest in more developed regions, such as East Java.
Another finding from Phase I is that the comprehensive approach in Bulungan, North Kalimantan had a greater and quicker impact than in other regions (figure 5). The program in this district involved many actors (government, community, university and private sector) and had strong political support from the regent. After one and a half years, the level of literacy in pilot schools in Bulungan was higher than the average in East Java that began with a much higher average baseline score. As figure 6 illustrates, the intervention in Bulungan saved the districts one year of schooling to achieve a basic literacy standard for most students (87 per cent). This district is currently scaling out the literacy program to all teachers and all schools and the benefits will potentially be massive.

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19 This refers to basic literacy skills only (letter, syllables, words). East Java scores were higher for comprehension.
Figure 6: Students passing the basic literacy test, North Kalimantan
3 CHALLENGES, RISKS, OPPORTUNITIES AND LESSONS LEARNED

INOVASI is an adaptive program and Phase I provided many opportunities to learn from experience, respond to challenges, and identify and mitigate risks. As the program moves into Phase II, we need to take stock of these lessons learned.

3.1 Challenges and Risks

This section focuses on the current challenges and risks INOVASI faces as the program transitions to Phase II as well as those we navigated in Phase I. Some issues, such as using the PDIA approach, present challenges or risks but also provide opportunities.

GOVERNMENT PARTNERS

In Phase I, INOVASI cultivated broad and deep working relationships across key directorates in MoEC and MoRA that do not depend on individual champions. Nevertheless, if the new minister restructures or reshuffles senior positions within MoEC we may need to rebuild some of these key partnerships. A possible reshuffle was reportedly delayed by the COVID-19 pandemic but is likely to take place in 2020. A change of minister, which is always a possibility, would also likely result in further reshuffling of senior positions.

Elections occurred at all levels in Phase I and will also take place in Phase II. There are risks for potential political unrest during and after elections that may create challenges for a program like INOVASI that works through government to achieve outcomes. In Phase I, we were able to handle any unrest and navigate changes in personnel and priorities. Teams at the provincial level will need to exercise prudence in maintaining relationships and continuing to leverage strong working relationships with the regional development planning agency, local leaders and civil society organisation partners. Furthermore, as districts adopt, adapt and scale out pilots developed by INOVASI, the risk that they will dilute the effectiveness of the interventions through reduced resourcing is real. The INOVASI team can only influence the direction pilots take in proportion to the level of support we provide.

The current COVID-19 crisis is a major distraction for government and risks derailing the reform movement that began in late 2019. The closure of schools could increase the learning gap between advantaged and disadvantaged students, with special needs students particularly at risk. The full consequences of the crisis are not yet known but are likely to impact on government priorities and on the INOVASI program. We should anticipate a slower start to Phase II, given that district budgets for scaling out pilots have been diverted to addressing the pandemic. The first two months of Phase II will focus on developing the program strategy and a comprehensive workplan for the first year. In this context INOVASI will need to consider which activities to drop, add or keep and which to adapt or improve. Our priorities are likely to include humanitarian responses, health infrastructure and communications, governance technical assistance and support for early recovery and inclusion. Figure 7 illustrates the responses from INOVASI and TASS to the situation created by the COVID-19 pandemic in Phase I.
INTERNAL CHANGES IN INOVASI

As an adaptive program, INOVASI has evolved over Phase I. The lengthy process of finalising the program design was followed by a protracted inception period stretching into the first 18 months (2016 to mid-2017) before the program got fully underway. As the program found its strategic intent and orientation 12–18 months in, changes in senior personnel caused some loss of momentum but ultimately resulted in a stronger team and a focused and cohesive program. Activity scaled up rapidly and the early underspend was made up in the third and fourth years. We expect to take the key management team forward into Phase II and ensure a seamless transition.

BUDGET ADJUSTMENTS

In the second half of Phase I, the budget pressures that DFAT was under led to a number of changes in our program. We spread INOVASI’s budget over six additional months up to 30 June 2020 by restructuring activities and staff to accommodate the extra time. Also, after our budget was cut by over AUD2 million in early 2019, we had to refocus our priorities, scale down some activities and then gradually phase down staff from December 2019.

The risk of further adjustments is real, given Australia’s national review of its aid priorities and the impact of the COVID-19 pandemic. In May 2020, DFAT released the policy document, Partnerships for Recovery, Australia’s COVID-19 Development Response (DFAT 2020) and INOVASI Phase II
aligns well with this policy. The investment supports the Indonesian government and contributes to the development policy action areas by promoting: (1) economic recovery through building the quality of Indonesia’s human capital; (2) stability and social cohesion by helping maintain education services; (3) health security by using the education system to promote COVID-19-safe practices; and (4) protecting the most vulnerable by minimising the widening of existing inequalities (economic, gender, social, geographic). Nonetheless, further adjustments to INOVASI’s budget are possible in this period of economic uncertainty.

These adjustments create a challenge as activities and programs may have to be dropped or downsized. While we have managed this so far, in future we will build a margin for error into budgets and plans to anticipate further changes. During the final years of Phase I, INOVASI developed a conservative approach to budgeting that allows for possible reductions. Going into Phase II, we are taking a more proactive approach by exploring opportunities to attract additional funding from other sources, including from the Indonesian government. This will not only counteract Australia’s declining aid budget but also diversify the funding platform and strengthen the sustainability of the program’s efforts.

**ADAPTIVE, POLITICALLY-INFORMED APPROACHES**

INOVASI adopted the PDIA approach developed by Harvard University’s Centre for International Development. PDIA is an emerging and dynamic methodology that we are still learning and our approach to it is still evolving within the program (Kleden 2020). Our approach to PDIA and adaptive programming in Phase I was both effective and cutting-edge. This perception was supported in the independent review conducted by DFAT (Nichols & Bodrogini 2019), in discussions at the Australian Aid Conference in 2020 and in consultations with Lant Pritchett and senior RISE and Harvard researchers. Nonetheless, PDIA and adaptive programming create risks and challenges, not least being the long timeline and serious stakeholder engagement required for deep change to result.

This development and interpretation of PDIA in INOVASI has at times been contested, creating tensions within the team. We refined the approach over Phase I, moving from a formulaic method for classroom action research in the early *Guru BAIK* pilot to an integrated, politically-informed and technically-sound approach to working with teachers, national stakeholders and districts in subsequent pilots (Kleden 2020). Some saw this shift as abandoning the principles of PDIA at the time and it did lead to a more uniform approach to teacher development modules during the first round of ‘short-course’ pilots. However, we needed to find a balance between local ownership and existing professional knowledge. We could not expect village teachers to solve problems on their own without the benefit of local and international experience and understanding of how to teach literacy and numeracy.

One key idea from PDIA is the need for a sufficiently large ‘change space’ to allow reform to take root and to sustain this reform. This is known as the ‘triple A concept’ that refers to the need for ability, authority and acceptance to be present and intersecting in any reform process. INOVASI has worked mainly on developing the ability of teachers and administrators while thinking and working politically to expand the authority for teachers to innovate and change their teaching practices. The new Minister for Education and Culture is expanding this political dimension by issuing edicts and policies to encourage diversity, deregulation and innovation at the local level. However, reforms can only succeed with full support for the reform agenda from government officials at the various levels. Furthermore, we have yet to systematically address the third ‘A’, acceptance. This is the cultural dimension. While evidence from the early *Guru BAIK* pilot suggests teachers were developing a growth mindset and becoming more accepting of change, this needs to be better incorporated into
the mainstream continuing professional development modules. Future pilots and related activities need to focus on all three aspects in equal measure, depending on the context: ability (technical capacity building), authority (thinking and working politically) and acceptance (cultural work to develop a growth mindset among teachers and administrators).

**Managing local initiatives in pilot design and implementation**

Internal tension arose in 2018 between the central team’s desire to see its well-planned modules faithfully implemented and the local teams’ desire to adapt and iterate the approach in response to local challenges and opportunities. This was resolved in 2019 through dialogue and sharing local initiatives that proved successful. In Phase II, we expect to work more closely with national as well as local government counterparts in the co-design, implementation, monitoring and evaluation of pilots. We also expect to see provincial managers and their teams adopt a more diverse, decentralised and bespoke approach to address local issues and maximise on local opportunities. This will mitigate the risk of tension between technically-informed design and local initiative.

Adapting the generic training materials in response to local feedback requires a high level of capacity among district and local facilitators. Ensuring the quality of the adapted design and implementation means coordinating with the central team and this takes time. These resources – capacity and time – are not always available. Overall, the approach worked better in some regions than others but this was mainly due to the strength of leadership at provincial level.

While local facilitators cannot be expected to adapt training materials, they can adapt and develop the strategies, concepts, assessment ideas and activities in INOVASI’s generic materials. In Phase II, INOVASI will explore and pilot approaches to remote training for continuing professional development facilitators, quality control and delivering materials to teachers that allow for local ownership and contextualisation.

We also need to make it clear to districts that when INOVASI pilots a new approach, we cannot be sure it will work until the evidence is in. Districts and other partners need to realise that the pilot process is iterative and developmental, and that they are partners in that process. They are not ‘buying’ an approach with guaranteed results.

### 3.2 Lessons Learned

Key lessons from INOVASI’s experience in Phase I are as follows:

- The PDIA approach works well at district level. In districts like Bulungan, where the PDIA methodology and the ‘thinking and working politically’ approach was most successfully implemented, the districts took ownership of the problem and the solutions, leading to proven practices being scaled out across the whole district. This included teacher training in literacy through teachers’ working groups, book procurement, and coordination with local libraries and village-based reading centres.

- Initial pilots can be small and affordable but still produce significant results. For example, Bulungan began with pilot programs in only seven schools.

- Effective pilots are comprehensive and draw on the knowledge of what works and what does not work from previous projects. Over 50 years of partnership between the Australian and Indonesian governments, the non-government sector and other donors in Indonesia, the most successful pilots have drawn on earlier work, taken a political approach at district level, and involved co-funding and partnerships with all levels of government, with universities and non-governmental
organisations. The successful technical training program for teachers, for example, learned from the 'pure' PDIA approach used in the earlier Guru BAIK pilot in West Nusa Tenggara that relied on teachers' initiative without providing the benefits of technical training.

- Localised programs and sub-national actors can drive national policy change. For example, as a result of innovative approaches in North Kalimantan, the national government changed regulations and practices around book approval to streamline the process and allow schools to procure more books.

- Using evidence as it emerges can build local ownership of the problem and drive reform. The most successful pilot teams did not wait for the lengthy process of producing 'rigorous' results but instead used preliminary findings from rapid assessments to get buy-in from local partners.
4 MONITORING, EVALUATION, RESEARCH AND LEARNING

4.1 Monitoring, Evaluation, Research and Learning Systems in Phase I: Strengths and Weaknesses

INOVASI’s monitoring, evaluation, research and learning (MERL) system was designed to have three levels in Phase I:

1. Program-level monitoring and evaluation (long feedback loop, aggregated baselines and endlines);
2. Pilot-level monitoring, evaluation and learning (intermediate feedback loop, structured baseline and endline, and spot checks.)
3. Pilot-level monitoring and experiential learning (tight feedback loop, day-to-day observations, reflection and learning) (INOVASI January 2018).

In implementing this three-tier structure, the baseline and endline surveys used to evaluate individual pilots formed the core of the baseline and endline surveys used to evaluate the program. This integrated or ‘nested’ structure produced strong consistent data but was also problematic in that it did not address the unique character of each individual pilot. While this weakness was made up for to some extent in spot checks and other measures such as pre-tests and post-tests, it was a missed opportunity.

The system also included a responsive research component and a learning component, focused on knowledge sharing. The strength of this system in Phase I is that it produced strong, credible evidence that has driven reform, informing the decision-making process at both national and sub-national levels. What makes the evidence credible is that it focused on learning outcomes, rather than using teacher behaviour as a proxy. Evidence of change in teacher behaviour was useful for explaining why learning outcomes improved – but learning outcomes are what matters to decision-makers. MoEC recognised this approach as a model for its large-scale Program Organisasi Penggerak and appreciated the PDIA elements that mean implementers can learn by doing when they do not yet have a fully-defined approach or solution.

Box 5: INOVASI’s monitoring, evaluation, research and learning system

The evidence produced from pilots and responsive research has informed policy as intended and was well received in public consultations (such as Temu INOVASI) and discussions with government and donor partners. The learning component ensured that knowledge produced by the program was
shared internally and with development partners, including DFAT, as well as externally with the government and non-governmental organisations. The evidence from pilots, research, international experience and previous programs was brought together in seven thematic studies on: continuing professional development and sustainability; literacy; numeracy; gender equality and social inclusion; disability inclusion; PDIA; and partnerships (see annex 1).

The MERL approach also had its weaknesses. Monitoring and evaluation are critical to INOVASI’s theory of change and scale-out strategy because of their role in producing evidence. This strategy requires a flexible and nimble system that can provide quick feedback at the same time as building a credible body of evidence of what works. This area of the program still needs improvement.

Four fundamental design problems emerged with INOVASI’s MERL approach during Phase I:

1. Integrating the pilot and program level baseline–endline data and analysis reduced the value of both program and pilot evidence. The program evaluation suffered because of the short-term nature of the pilots and lack of a methodology to trace policy impacts. Instead of program outcome evidence having the quality of a three-year experiment, the outcomes are based on 6–12 month periods (the overall span of the pilot rounds).

2. The MERL imperatives for ‘rigour and credibility’ as well as ‘speed and responsiveness’ seemed to be competing.

3. The iterative nature of INOVASI’s pilots made it difficult to hold constant what was being evaluated, a bit like trying to hit a moving target.

4. A technical problem was the ambitious database in terms of the amount of data to be collected. This occurred because the SIPPI data system was developed before we knew exactly what information we should collect and analyse. This made the system expensive and slow, and the data difficult to manage, creating challenges for advisors and researchers.

These problems were compounded by the decision to outsource data collection to local agencies. From one perspective, this increased objectivity – and therefore credibility – of the results. However, from another perspective, it reduced credibility because the enumerators collecting data were mostly not professional educators and were thus unable to interpret or understand the classroom practice they were observing. The division of responsibilities within the INOVASI team, between the MERL and education personnel, also created inefficiencies and concerns about credibility. While the baseline–endline mechanism is too cumbersome for the pace of pilots and scale out, we have not been able to optimise evidence of improvement from short feedback loops. The results are generally credible but the current system proved too slow to provide timely feedback for government partners and for implementers.

Districts, national government and DFAT all work within the constraints of budget and planning cycles that require planning for up to a year. Meanwhile, baseline–endline studies do not provide evidence until around six months after a pilot is completed. The pilot-level monitoring and experiential evaluation approach intended to provide quick feedback within the pilots, was not as effective as expected. In this context, the pilot process itself is problematic. Pilots implemented within a six-month cycle may not produce convincing evidence of improved learning outcomes. Moreover, the PDIA process assumes that pilots are developed in an iterative way and that it takes time – probably several years in our context – to produce the rigour of results that can inform scale out and policy. This timeframe is too long for the four-year program cycle.

INOVASI’s MERL strategy and results framework were redesigned in the second half of 2017. The monitoring and evaluation functions were integrated with the previously separate research and
learning functions. This allowed only two years to implement the new system. In this period, INOVASI focused on ‘exploring the design space’ – working with local partners to find solutions to problems of education quality – leaving the production of rigorous evidence to others or to a later stage. INOVASI’s iterative, exploratory pilot approach does not produce hard evidence. It does require credible evidence, however, to support scale out and scale up to policy level. It is only when successfully piloted solutions are scaled out (or even better scaled up to sub-national and national policy level) that more statistically rigorous studies can be conducted to generate evidence of the effectiveness of solutions. The Phase I MERL strategy, re-designed in 2017, did not allow for comprehensive evaluation of scaled-out programs. Randomised controlled trials (or similar) may be undertaken in Phase II, possibly by a third party. Against this background, we are currently reviewing approaches to baseline–endline studies, spot checks, reflection and strategy-testing processes:

- **Baseline–endline studies**: INOVASI conducted baseline and endline studies on all pilots in Phase I using the program’s SIPPI framework and instruments. These studies include substantial student learning assessments, teacher surveys, classroom observations, interviews and contextual data collection. In Phase II, we will improve the processes for generating credible evidence to support scale out and scale up in two ways: (1) by reducing the amount of data and size of samples for baseline–endline studies to enable an affordable, quicker turnaround; and (2) by tailoring the instruments and methodologies to the themes in each pilot to ensure we obtain more subject-specific data for analysis.

- **Spot checks**: INOVASI conducted spot checks during pilot implementation in Phase I and updated the instruments in 2019. These spot checks included classroom observations, surveys and interviews, and gave early indications of any successes. They also enabled deeper analysis of variables to answer the questions about how and why change occurs and makes a difference to learning outcomes in different contexts. However, budget constraints in Phase I meant that spot checks were only undertaken once for each pilot. This approach is being reviewed for Phase II as we may need to integrate the spot check and reflection or pilot monitoring processes.

- **Reflection and pilot monitoring**: INOVASI Phase I used a reflective process to provide real-time feedback on pilot processes and enable iterations and ‘learning by doing’ through discussion with local facilitators and participants in teachers’ working group sessions. We are working to improve this reflection process for Phase II. The two roles of reflection, as a learning process and as a means of producing evidence, need reconciling — and the process needs improving.

- **Strategy testing**: Strategy testing is integral to the adaptive approach. In Phase I it was not integrated into MERL processes, leading to duplicative activity and strategy testing not being able to access timely data to evaluate strategies.

### 4.2 Towards Phase II

As an adaptive program, INOVASI and TASS will review the MERL approaches in Phase I and design an effective approach for Phase II. The new approach will build on the strengths of the approaches in both the TASS and INOVASI Phase I programs and will include:

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20 In December 2017, Lant Pritchett, one of the authors of PDIA and a consultant to both INOVASI and RISE, visited INOVASI sites and spent time with the team. In consultations between INOVASI and RISE, he recommended that INOVASI focus on ‘crawling the design space’ and, when solutions are ready to be scaled out, RISE could conduct randomised control trial studies.
1. Appointing TASS’s international advisor as monitoring and evaluation advisor, and INOVASI’s current strategic planning advisor as research and learning advisor;

2. Introducing a methodology to trace policy – attributing contributions to policy development and changes in practice resulting from policies implemented – based on the successful TASS approach to program evaluation;

3. Ensuring that monitoring and evaluation systems capture not only improvements in learning outcomes but changes in behaviour and systemic change;

4. Engaging national and sub-national stakeholders by: giving them greater ownership of the MERL process and outputs; co-designing and co-implementing the pilots and co-publishing the results; doing more structured joint monitoring visits; and involving stakeholders in monitoring field activity and setting targets around sustainability;

5. Instituting a strong reflection process to enable learning-by-doing and an iterative, continuing improvement process within pilots, and better integrating the MERL, Education Program Development and Communications team members in the provincial teams;

6. Taking a more targeted, rigorous and consistent approach to measuring learning outcomes, tailored to the key pilot themes in each location (literacy, numeracy, character education, and so on). The approach may draw on lessons from DFAT’s teacher development multi-year study series conducted in Lao PDR, Timor-Leste and Vanuatu (DFAT 2019);

7. Strengthening qualitative research approaches to answer the ‘why?’ question in pilots: what works and why;

8. Integrating financial monitoring to better evaluate the cost–benefit of different approaches;

9. Developing a lighter, nimbler database and data management system for quicker turnaround and easy access to data and findings from pilots and responsive research;

10. Conducting longitudinal pilots and studies that may use existing data from earlier pilots and include longer pilots with a built-in six-month cycle of activity but longer engagement with selected schools and teachers;

11. Using stronger integration and a more structured methodology for routine strategy testing;

12. Seeking opportunities for small-scale responsive research to support demand from government partners and to explore findings from the pilots.
Pagi yang Cerah

Udin berjalan bersama
mengajarkan menjaga
Semua berjalan
mengajarkan tubuh t
5 COMMUNICATIONS

Given the iterative, locally-focused and problem-driven nature of INOVASI, the Communications team had to be agile and proactive to play an effective strategic role. Over the course of Phase I, we strengthened our communications systems, processes and platforms, and significantly increased our communications products and media engagements. As more evidence emerged from the pilots and from strategic research and policy initiatives, particularly in the 2018–2019 period, the Communication unit used various ways to target and reach audiences (INOVASI 2018). In the 2019–2020 period, INOVASI’s strategic communications function evolved again, as the need to inform policy and practice became ever more vital.

5.1 Communication Products

Throughout the program, as documented in the six-monthly reports, INOVASI has produced a total of 714 communications products. This includes stories from the field, promising practice booklets, newsletters, infographics, videos, policy briefs, social media content, press releases and other products for significant meetings and events. In 2019, we conducted a communications evaluation through a series of interviews to assess the effectiveness of our communications strategy. Education stakeholders reported that they value INOVASI communications products that improve and inspire changes in teaching practice and classroom management. Government stakeholders emphasised that communications products and platforms, including videos, are the most effective way to show what is happening on the ground and give a human face to pilot progress and findings. They are also useful emotive tools during advocacy efforts.

EVENTS

As part of INOVASI’s strategy to engage with the Indonesian government and foster dialogue around evidence-based teaching practices that are proven to work, the program took various opportunities to conduct or support government and partner-led events. Whether events are led or supported by

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21 INOVASI internal communications evaluation report was submitted as annex 6 of the January 2020 six-monthly report.
INOVASI, they effectively promote program findings, practices and progress, and offer opportunities to engage with and influence key decision makers. Temu INOVASI is a highly valued event format at provincial and national levels. In 2018–2019, Temu INOVASI events were held at national level four or five times a year. Events were also held at provincial level in East Java and West Nusa Tenggara, and in various partner districts. In total, over the lifetime of the program (2016–2020) 17 such events were held in Jakarta and at the provincial and district levels.

DIGITAL AND SOCIAL MEDIA REACH

Social media platforms are more effective in reaching INOVASI’s audience. As confirmed by our monthly digital analytics, people generally prefer to access INOVASI products and content via the program’s social media platforms – rather than on the INOVASI website.

Co-creating and disseminating content is vital for digital sustainability. In the 2018–2019 period, INOVASI engaged with MoEC’s information and communication technology (ICT) department in a number of ways. For example, the ICT department hosted INOVASI products on its Rumah Belajar (learning home) website, we jointly created content for teachers’ radio and TV talk shows using online platforms, and we shared initial ideas for a formal partnership in Phase II. With its website, large networks within and between all districts in Indonesia, and internal digital equipment, the ICT department is the ideal partner for INOVASI’s digital scale out in the future. Furthermore, using digital platforms will be key to scaling out teaching ideas and practices.

INOVASI and TASS also organised a five-day study tour to Australia for MoEC’s ICT team and ambassadors of Rumah Belajar in August 2019. This visit provided an opportunity for learning by sharing common education problems and discussing solutions.

MEDIA COVERAGE

As seen through INOVASI’s media monitoring, updates and progress covered in strategic publications hold far more weight than lesser-known media platforms. By the beginning of 2020, INOVASI appeared in 116 articles in both Kompas (print) and Kompas.com. At the national level, publications like these are more likely to reach targeted MoEC stakeholders. When shared through the MoEC/INOVASI WhatsApp group, the Kompas publication name also holds more value. This is echoed at the district level.

STRATEGIES THAT SERVE AUDIENCE AND PURPOSE

Tailoring products for different audiences and purposes is key in INOVASI’s current communications approach. A one-size-fits-all approach to developing and disseminating products is inadequate and will not be effective in the long term. We will need strategies for different audiences and different purposes. Many district-level stakeholders emphasised that certain products may suit the local context and certain platforms would be better based on local needs.
SUPPORTING GENDER EQUALITY AND SOCIAL INCLUSION INITIATIVES

During Phase I, INOVASI’s Communications team mainstreamed gender, disability and social inclusion best practices in developing and disseminating all communications materials. We ensure that our materials do not reproduce negative gender and social stereotypes and that content is balanced and inclusive. This includes videos, talk show panels at events as well as imagery used in publications, digital materials and training modules. We strive to reflect the diversity of partner students and teachers wherever possible. The Communications team also played a pivotal role in ensuring compliance with child protection requirements. All products comply with DFAT’s child protection policy and guidelines for staff, referring to the use of social media accounts, geo tagging, and managing child and parent consent forms when taking photos and videos.

5.2 Towards Phase II

Communications are essential to the program strategy for both Phase I and Phase II. The role of communications is more strategic in INOVASI than in other programs where the focus is primarily on promoting the program and supporting public diplomacy. In addition to these functions, INOVASI relies on communications to support a policy advocacy agenda and to share evidence and good practices developed in the program. However, measuring the level of influence of communications is not straightforward and more needs to be done to develop this process in Phase II. This will be built into the updated MERL strategy. Early in Phase II, we expect to update the program Communications Strategy and conduct a study to evaluate the effectiveness of communications in supporting policy and practice change.
6 CROSS-CUTTING ISSUES

INOVASI has three major cross-cutting issues – gender equality, social inclusion (disability, remoteness and ethnicity) and child protection. These were built into the design, implementation and evaluation of all activities and programs. In addition, INOVASI increased its efforts over Phase I on environmental impact and private-sector engagement. The Gender Equality and Social Inclusion (GESI) Strategy (revised in October 2018 and due for further revision in 2020) addresses issues of access to education, opportunities and barriers to learning, and how best to reflect INOVASI’s commitment to providing quality education to all children.

Box 6: Key activities focusing on cross-cutting issues

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Key activities included:

- Investing in improving language transition for children who do not speak Bahasa Indonesia at home. The three pilots were implemented by INOVASI in Bima, by Sulinono in East Sumba and by Summer Institute of Languages (SIL) in Southwest Sumba;
- Working in communities with particularly difficult educational contexts (for example: high absenteeism, significant numbers of working children, shortage of qualified teachers): Two pilots were implemented – multi-grade learning (in Probolinggo, East Java) and literacy in Dampu, West Nusa Tenggara, resulting in stronger engagement between schools and school committees;
- Delivering innovations that improve teaching and learning in schools in remote areas: Across four provinces, learning outcomes are diverse, with East Java ranking highly but East Nusa Tenggara, one of the most challenging areas, at the lowest rank. However, endline studies showed that while East Nusa Tenggara remains at the bottom for learning outcomes, it showed greater improvement than other areas. Partnerships to increase the availability of books (traditional and digital) in remote areas were successful in both East Nusa Tenggara and North Kalimantan;
- Improving the diagnosis and teaching of children with disabilities (see section on disability and inclusion).

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6.1 Gender

Although INOVASI did not focus on gender equality in Phase I, this issue nevertheless featured in our work as follows: we achieved a modest reduction in the ‘boys’ achievement gap’ in numeracy and literacy in INOVASI pilot schools; we used sex-disaggregated instruments for most of our data collection and analysis; we screened the final versions of all our pilot materials to ensure they were ‘inclusive’ before formally handing over to MoEC; we discussed how gender is relevant within INOVASI (harassment) and in operations (recruitment) among the INOVASI family; and lastly we incorporated gender equality and social inclusion materials in all INOVASI pilots.

Challenges related to gender and social inclusion persisted during this period. For example: stereotyping in textbooks and school practices; disproportionate promotion of men within the bureaucracy; and the lack of differentiated teaching practices, among others. We plan to review and address these issues in Phase II.

6.2 Disability and Inclusion

Disability and inclusion are key areas for INOVASI. Early findings highlighted the challenges to delivering quality education for students with disabilities. These include, for example, teachers’ ability to identify disability and address learning support needs for students with disabilities, and the limited enrolment of children with disabilities due to systemic and socio-cultural barriers. At the request of the district government, the first inclusive education pilot was implemented in 19 schools, including
four madrasah in Central Lombok. Baseline data showed low levels of competence among teachers in literacy and numeracy that was a potential confounder in teachers’ assumptions about students who have disabilities. The early pilot was restructured to build in teacher competencies in literacy, with an emphasis on inclusive teaching skills. Subsequent inclusive education pilots focused more directly on disability-inclusive education.

The second round of inclusive pilots was implemented in 27 schools, including two madrasah, across Central Lombok, East Sumba and Probolinggo. In East Sumba and Central Lombok, grant-based partnerships included Circle of Imagine Society (CIS) Timur and University of Mataram respectively, while training in Probolinggo and Central Lombok was provided through locally-recruited facilitators, thus contributing to sustainability and preparing for subsequent government-led scale out pilots. The pilots used the five-unit disability-inclusive education module to build teachers’ skills in using the Student Learning Profile to identify students with functional difficulties and address their learning and support needs.

With support from INOVASI and TASS, MoEC developed an application to collect data and map the distribution of students with disabilities to inform human resource planning for special education teachers and mentors. A plan to film online training to expand the use of the Student Learning Profile is pending due to the COVID-19 pandemic. MoRA has started training supervisors and principals to use the Student Learning Profile primarily so they can identify the needs of inclusive madrasah at the local level and justify awarding ‘inclusion’ grants.22

Endline findings show that students in the pilot schools in all three districts have better attitudes towards their peers with disabilities, while teachers’ attitudes, confidence and knowledge have also improved. In East Sumba, village heads, community members and school principals were more open to enrolling children with disabilities in mainstream schools. However, endline assessments of priorities show that only 5–10 per cent of teachers and principals consider inclusive education to be a top priority. The issue is eclipsed by concerns around infrastructure, support to teachers, learning facilities and budgets or staffing, highlighting the fundamental challenges facing many schools.

Disability and gender inclusion were not a focus for the governance aspects of Phase I. However, these issues will be addressed in Phase II, with measures put in place to ensure that women, people with disabilities and other marginalised groups are well represented in steering committees and governance bodies, as well as in program activities.

6.3 Child Protection

All INOVASI personnel received refresher or induction training in child protection, the code of conduct, diversity and respectful workplaces. Over Phase I, INOVASI improved its safeguarding mechanisms based on lessons learned from the field. This included having focal point personnel in each province, making reporting mechanisms accessible at the community level and developing appropriate materials on child safeguarding for INOVASI staff, partners, local facilitators and teachers.

22 In 2019, MoRA piloted the Student Learning Profile at around the same time as MoEC. In late 2019, MoRA started awarding grants to inclusive madrasah and using the Student Learning Profile to identify the needs of the madrasah and their eligibility for the grants.
6.4 Environmental Policy

To minimise negative impacts resulting from aid investments and to reduce the vulnerability of communities to disaster and climate change, INOVASI conducted an environmental assessment early in 2019. We also decided to ban the use of single-use plastic in key program activities where feasible, in accordance with DFAT’s environmental and social safeguard policy. This ban extended to venues that organised our national events, as well as INOVASI event venues at the provincial, district and school levels. At the INOVASI Jakarta office, waste management has improved and staff separate office waste into plastic, paper and organics to send to a recycling company twice a week.

In terms of reducing environmental disaster risk, INOVASI continues to ensure the safety of staff during environmental events, like the Kalimantan fires, by providing masks and allowing staff to work from home.

6.5 Private Sector Engagement

In championing the sustainable expansion of the INOVASI and grant-funded pilots, the program has proactively explored partnerships with the private sector. In North Kalimantan, the broad collaboration involved the private sector (specifically through the corporate social responsibility program of local industry), book suppliers and village libraries or literacy working groups to support the procurement of children’s reading books. In West Sumba, two school libraries were built and more are planned from private funds raised by Rainbow Reading Gardens, one of our grantee partners. In other districts in East Nusa Tenggara, a range of stakeholders engaged in improving education quality, including the private sector and corporate social responsibility projects. INOVASI also collaborated with the Tanoto Foundation to co-develop training for the Numeracy 2 module and to co-host INOVASI’s Learning Days.

Going forward in Phase II we will increasingly focus on: leveraging private-sector funding; building coalitions of change; creating partnerships between universities, local government, non-government agencies and the private sector; and finding common spaces where interests intersect around funding and programming to improve learning outcomes in literacy, numeracy and inclusion. Sustainability will increase with more parts of the ecosystem working together to improve learning outcomes and education quality.

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23 In North Kalimantan at the provincial level, the literacy working group organised for companies’ corporate social responsibility funds to support book procurement, particularly reading books for children. The companies involved included Bank Indonesia and MEDCO. In Malinau district, North Kalimantan, PT Baradinamika Mudasukses (a mining company) supported reading by providing reading books and financing village representatives to attend reading centre strengthening activities hosted by INOVASI.
7 SUSTAINABILITY

Sustainability is central to the INOVASI Phase I program design as its ultimate goal is to support and inform policy and practice development in education at sub-national and national levels. Initially, we piloted local solutions to learning problems identified by the partner districts. This approach evolved as INOVASI revitalised the teachers’ working groups and trained local facilitators to pilot short courses to improve teachers’ professional practice in key areas. INOVASI also worked at system level with districts, provinces and national governments to embed the lessons from these pilots in policy and programs. This work is expected to continue in Phase II.

The purpose of scaling out successful practices was three-fold: (1) to increase the impact of the program, reaching a wider group of schools, teachers and students; (2) to find out if the approaches worked to improve learning outcomes in different contexts and at the system level; and (3) to build a strong partnership and a sense of ownership for the INOVASI program within government. This ownership is intended to sustain both the approach to continuous improvement and the results from the program activities.

The question of sustainability needs to be considered in this context. The 2019 independent review of INOVASI and other DFAT education investments reported as follows:

‘The move to the short course modality has been an effective approach to build the competency of teachers and improve learning outcomes for students, rather than focusing on PDIA as an activity in itself for the initiation of each pilot. However, caution should be exercised in developing further “implementation” activities for expansion, rather than a true piloting and testing phase to address new problems. Sustainability should be sought in local levels (and national government) taking up the lessons from proven pilot lessons rather than expanding implementation of successful activities to new locations’ (Nichols and Bodrogini 2019, 28).

Sustainability may include:

1. Changes to teaching and education management practices that continue beyond the life of the program, demonstrating the sustainability of the outcomes.

2. Successfully piloted approaches, such as implementing short courses or using the Student Learning Profile, that are expanded through independent funding and by independent implementers. Funding can come from government (especially district budgets), the private sector, philanthropy or donor programs, such as the World Bank funded loan for continuing professional development in MoRA. Implementers can include: districts; other government agencies, such as the educational quality assurance agencies; non-governmental organisations; and universities. This demonstrates the sustainability of the approach.

3. ‘Scaling up’ program outcomes, in the form of changes to systems, policy and programs in the government that result in improved learning outcomes. This broader form of sustainability represents the sustainability of principles established by the pilots.

While these are all valid, as suggested in the extract from the strategic review, Phase II of INOVASI is designed to tackle the third aspect of sustainability: scaling up to system level. Meanwhile we still need to monitor the first two aspects, including the scale out to new schools and districts, to confirm and further improve the effectiveness of the approaches introduced in Phase I. In other words, we need to find out what works at system level. This will provide stronger evidence to inform policy as it evolves.
7.1 Scale-out and Sustainability: Evidence from Phase I

INOVASI’s thematic study on continuing professional development and sustainability (Cannon 2020) addresses two main questions about sustainability and scale out: is there evidence to show which approaches are likely to be sustained – and why; and is there evidence to show which approaches have actually been sustained – and why? An analysis of the literature, INOVASI documents, field data and the results of case studies confirms that INOVASI’s approaches are likely to lead to the sustainability and scale out of benefits from the pilots. This conclusion is informed by testing INOVASI’s approaches in context against a set of educational, management and sustainability/scale-out indicators. Phase II will provide an opportunity to test this empirically.

The thematic study offers further evidence that the benefits from past development project activities have been sustained. These are primarily in teaching and learning but also in school-based management and these benefits reinforce INOVASI’s work. Factors associated with sustainability at school level include: (1) the relevance of the learning and teaching approaches adopted for teachers’ day-to-day work; (2) the increased motivation to teach derived from seeing students’ results improve; (3) educational leadership provided by principals and supervisors; and (4) a strong sense of local ownership and responsibility for change. Another element that would enhance ownership and sustainability is if the role of local facilitators, trained through the pilots, could be institutionalised giving them the status and authority to continue their mentoring support in the schools and working groups after the program ends.

District governments’ policies and regulations, as well as their financial support, further reflect local ownership. In line with INOVASI’s theory of change, the thematic study finds that:

‘...sustainability and scale out are being achieved from the “bottom–up” by teachers and facilitators, initially within schools, but subsequently at more substantial levels, including the teachers’ working groups, sub-districts and districts as a whole’ (Cannon 2020).

Notwithstanding this, INOVASI’s spot-check data shows that most of the pilot schools do not allocate schools operational funds to some core teaching support processes. Experience also shows that continuing professional development programs are often not sustained beyond the life of the program. This is partly due to facilitators being absorbed back into the system without the funding or status to continue their role and districts discontinuing funds and support for the training. Another risk is that districts rely on the donor-funded program to provide materials and train facilitators and, without ongoing technical support, the program fades even when the district is financially committed to continuing it. These risks will be acknowledged and addressed in Phase II, beginning with a joint review and sustainability strategy development process with our counterparts. Going forward into Phase II, we need to assess to what degree the positive results from Phase I are being sustained, including the outcomes from Guru BAiK, the grant-funded partnerships and the later pilots. Phase II will provide a rare opportunity for a longitudinal study of impact and sustainability and a chance to explore ways to ensure sustainability.

INOVASI’s success in producing sustainable outcomes in Phase I is indicated primarily by the principles established in the pilots and research activities that are being used to inform government policy and practice at national and sub-national levels:

- New districts are buying into the program and planning to fully fund the scale out of successful practices to transform teaching and learning for basic skills in literacy, numeracy and inclusion;

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24 A summary of this study is available in Annex 1 of this document.
• Partner districts are funding the scale out of activities to reach all teachers;
• Non-governmental organisations are establishing partnerships with districts to expand successfully piloted programs;
• MoEC is also reviewing its national curriculum, assessment policies and practices, and INOVASI’s pilots are helping to inform this process. Technical assistance for this process was provided by TASS in the first phase.

Notwithstanding these strong indicators of success, Phase II provides a unique opportunity to improve and test the approaches developed under Phase I and to confirm their sustainability – as well as the sustainability of INOVASI’s program-level approach to adaptive programming and iterative development. The core principles of partnership, adaptability, learning by doing, and ‘thinking and working politically’ will be further developed and tested through Phase II of INOVASI.

GOVERNANCE AS A SUSTAINABILITY MECHANISM

As described in the introduction, INOVASI is a partnership. Over the four and a half years of Phase I, this sense of partnership and ownership has grown steadily, along with the trust built among partners at national level by TASS and INOVASI – and at sub-national level, primarily by INOVASI. This places us in a strong position to further build the sense of ownership and commitment to the program in Phase II. Ideally, by the end of Phase II, INOVASI will be fully embedded in the Indonesian system and fully owned by our partners, in a way that sustains the program’s achievements beyond the period of DFAT’s financial support. One way to support this process is through governance arrangements.

Throughout Phase I, INOVASI and TASS shared a national steering committee that was chaired by the head of MoEC’s research and development body. The chairperson, Totok Suprayitno, became a strong advocate for the program. The committee, comprised of senior government officials, held six-monthly meetings with the program management team and DFAT. Over time, these meetings evolved to become larger and more representative and included a number of program personnel and partners from national and sub-national levels. INOVASI’s Management Unit was set up late in the second year, to provide a forum for echelon 2 and 3 personnel in MoEC to participate and to arrange joint monitoring visits to the field.

At sub-national level, the arrangements also evolved over time. DFAT did not have a memorandum of understanding with provinces or districts – these were signed between the national government, represented by the national steering committee chairperson, and the sub-national governments, represented by the governor. In West Nusa Tenggara, the first partner province, memorandums were established with the province and partner districts. In the other later provinces, the agreement was between national and provincial government, with partner districts as signatories. Sub-national governments were usually represented at provincial steering committee meetings by the deputy governor and deputy regent in each district. Meetings were typically held every six months. District planning meetings were held occasionally in the lead up to steering committee meetings, to allow for a less formal, more interactive joint planning process.

This arrangement worked well and supported a sense of ownership within the Indonesian government. Based on this experience in Phase II, we recommend keeping the national steering committee small and confining meetings to the membership of senior officials who can take decisions. They may appreciate the opportunity to meet across sectors and ministries at this high level and focus on policy and how INOVASI can support the development of better policy to improve learning
outcomes. The committee can continue to be chaired by a senior MoEC official and possibly co-chaired with MoRA. A smaller committee can approve annual work plans and consider the Indonesian government contributions (in finances and in-kind) to the program as it progresses in Phase II. The national steering committee can establish standing working groups to address key themes, including cross-ministerial coordination, national–sub-national coordination and coordination with the non-government sector. These working groups can replace INOVASI’s current Management Unit and provide for greater participation and ownership. At sub-national level, we recommend that the government’s internal memorandum of understanding be between national and provincial governments only, with arrangements for districts left to the discretion of the provinces. This arrangement should allow for more flexibility, enabling districts to enter or leave the program as commitments and contexts evolve.

In Phase II INOVASI team members will use inclusive language and INOVASI will no longer be characterised as a program funded by DFAT and delivered by Palladium. It is a *partnership*, co-funded and jointly managed with the Indonesian government. For example, there should be no distinction between INOVASI pilots and locally-funded pilots as all pilots will be co-designed and co-implemented. If governance arrangements are handled well by both partners and if conditions are conducive and there is a perceived need for INOVASI to continue beyond Phase II, it may then be possible for the national steering committee to continue to manage a fully Indonesian phase of the INOVASI program.
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ANNEXES

Annex 1: Thematic Studies Summaries

Executive Summary: Literacy Thematic Study


This study provides an account of INOVASI’s approach to improving early grades literacy in the program partner areas, the emerging evidence on the outcomes of this approach for students and teachers, and an analysis of what works to improve teaching and learning in those contexts.

INOVASI’s literacy orientation derives from Indonesia’s own nation-building vision of literacy as the means of widening horizons and capabilities in individuals and communities, as outlined in the Ministerial Regulation No 23 of 2015 on Character Development that triggered Indonesia’s literacy movement. This shares the belief in literacy’s potential that underpins literacy studies internationally. INOVASI’s support aligned with government’s aspirations in its approach to building strong foundations for thinking skills in the early grades.

Taking a problem-based capability-building development approach, INOVASI supported districts in identifying problems and piloting contextually-adapted solutions. Focusing on INOVASI’s lead pilots, the study investigates whether student and teacher literacy outcomes improved as a result of these experiments and what elements contributed to or challenged change.

The study develops an analytical framework to assess INOVASI’s work in improving literacy and to explore the program’s extensive data resources. INOVASI’s effect is aligned with strategies evidenced to work in global and Indonesian research and this lends value to the local evidence generated by the program. The study also conducts its own teaching case studies to elucidate the significance of quantitative findings by thick descriptions of practice and to probe the mindset drivers of teachers’ behaviour that influence classroom teaching and learning and their expectations of their students’ potential in literacy.

Key findings from the study show that student outcomes improved over the pilots – more than could be explained by natural growth – and students’ comprehension skills showed the most gain. The main findings on teacher improvement are that most teachers participating acquired critical skills of teaching reading. The most significant of these skills is their new capacity to identify the nature of a child’s reading problem and organise teaching to address it. Making learners’ problems the focus of teaching is potentially the point of departure for student-centred teaching. Developing students’ understanding and engagement with learning to their full potential depends on that shift.

The key findings on what worked can be classified as those elements that mitigated the disadvantages of a particular context. In this process, the commitment to literacy development shown by most district governments was a critical element. A pattern throughout the findings was that the most disadvantaged districts made the most gains and, with the support of the intervention, showed their capability of quickly closing the gap with the more advantaged districts. A related finding was that where pilot adaptations specifically targeted contextual difficulties, such as with language of instruction or access to books for children to read, outcomes outstripped the results of the mainstream approach to improving teachers’ know-how in teaching reading.
Such findings have implications for future strategies to maintain and extend the gains in literacy. The short duration of the pilots means that while the shift towards student-centred teaching practices has been remarkable, a permanent paradigm shift is not yet guaranteed.
Executive Summary: Numeracy Thematic Study


This study was designed and conducted by INOVASI to explore the impact of two main pilot teacher training programs on the teaching and learning of early grade numeracy concepts. These 'short courses' were implemented in partner districts in Indonesia. The process was underpinned by the program's theory of change based on a problem-driven iterative adaptation approach (PDIA). The study discusses what works in INOVASI’s partner districts and potentially in other Indonesian contexts to develop the numeracy knowledge, skills and behaviours, including fluency and flexibility with numbers, that students and teachers need.

Over the last ten years, the results for 15-year old Indonesian students participating in the Programme for International Student Assessment (PISA) show little improvement and about 40 per cent of the students scored below the lowest level in the international standard. In 2018, the results in mathematics show Indonesia ranking 70th out of 77 other countries, with a persistently and particularly low achievement level in thinking ability, mathematical inquiry and reasoning. This means that if students do not develop these basic competencies in numeracy then the prospect of a highly skilled and relevant workforce remains slim.

Although factors such as curricula, leadership, funding, family interest and involvement all contribute to student achievement, the most influential factor is the teacher. INOVASI’s two numeracy pilot studies in Indonesia consisted of two main teacher training programmes involving over four hundred teachers and over 10,000 students in grades one to three.

The training programs that INOVASI designed and conducted had to be practical, engaging and reflective in order to develop teachers’ own understanding of the curriculum content and how young children learn basic concepts. The 'short courses' took place in district cluster teachers’ working group (KKG) meetings and were presented by locally-trained facilitators who also supported teachers through mentoring sessions in the classroom.

The study collected both quantitative and qualitative data to establish what works in INOVASI’s partner districts and to investigate to what extent training teachers in specific areas will result in improved student learning outcomes. The emphasis was on teaching methods, providing and using appropriate materials and improving students’ higher-order thinking skills in applying their newly developed knowledge and skills.

The mixed method approach discussed in the study includes: teacher observations; student and teacher assessments; teacher interviews; and in-depth video observations.

Our overall findings suggest that teachers improved their own understanding of the mathematical content and the pedagogy needed to support children’s understanding of basic numeracy concepts. The quality of teachers' knowledge and skills in teaching numeracy progressed significantly. This in turn led to gains in students’ ability in both conceptual knowledge and understanding in number and in their ability to demonstrate their reasoning and apply their knowledge. Teachers used relevant concrete and visual materials effectively to scaffold students understanding towards more abstract concepts. They also asked students more open-ended questions, although students needed more exposure and experience in explaining the processes and thinking about how they arrived at a solution. Teachers also organised the classes so that students were in groups and, in the video studies, teachers had used pre-assessment data to organise the groups.
Students overall progressed in understanding and applying numbers. The use of materials to aid learning was evident in the videod lessons and teachers reported that the students were more engaged as a result. Both students and teachers needed more support in understanding how the use of materials helped them to learn specific concepts and be able to explain them. However based on the endline assessments, students progressed in reasoning and application. While the baseline showed that boys were often behind girls in mathematics, after the training pilots the boys progressed as much as and in some cases more than the girls.

This study provides evidence from INOVASI’s first phase that suggests more time and emphasis should be given in the curriculum for teachers to focus on early conceptual knowledge, skills and understanding. This will ensure a solid basis for more abstract learning later on.

Teachers have not been exposed to the methods that are essential in developing a deeper understanding of number and the students have not had adequate time to practise and explore number concepts. The training in the teachers’ working group meetings means that teachers can continue to learn with and from others and will be able to build on their teaching practices. Differentiated training for teachers and principals would also create awareness and support for new approaches.

Teaching and learning materials that fit the context, and are manageable and appropriate for the varying levels need to be provided and should be aligned with the students’ learning needs.

Teachers also need to conduct varied and regular assessments so they can use the outcomes effectively to organise the class. These assessments will give them insights into any difficulties or misconceptions the students may have so they can better meet individual, group and whole-class learning needs.
INOVASI’s approach to improving learning outcomes in early grades is through a strategy known as problem-driven iterative adaptation (PDIA). Development strategies begin with understanding local challenges, and designing, implementing, and testing contextually-relevant intervention pilots to improve learning and teaching. Working with local communities of practice, the teachers’ working group, is a key strategy. The continuing professional development (CPD) of teachers, principals and supervisors is the common approach to achieve change.

This study explores whether INOVASI’s approach works – and why – with a focus on the CPD of early-grade teachers through short courses in literacy, numeracy and supporting issues. The study further considers the sustainability and scale-out of benefits to local stakeholders. INOVASI’s approach to CPD, sustainability, and scale-out is consistent with the findings of studies published in the international and local literature. Used as a benchmark, these studies indicate no shortcomings in either INOVASI’s design or implementation of change. This outcome is reflected in the success of the work being undertaken in districts and schools. The evidence is that INOVASI and its Indonesian partners are working at the cutting-edge of sound, educational development practice in school reform to achieve improved learning outcomes in literacy and numeracy for children.

The success of INOVASI’s approach is due to its alignment with government policies, with the needs of teachers and schools, and with the evidence for educational change. The findings of the study confirm that PDIA principles are relevant in helping Indonesian education to become ‘unstuck’ in its progress towards achieving quality outcomes at scale, and in explaining what works and why in CPD and the sustainability and scale-out of benefits.

Case studies from East Java provide insights into how the processes of sustainability and scale-out have operated, demonstrating the face-validity of a set of indicators developed for the study. Further work is essential to develop an understanding of sustainability and the scale-out of benefits in other cultural contexts in Indonesia where INOVASI is also working.

School improvement must be managed on a continuing basis and not as a ‘one-off’ event. Accessible and continuing technical support to schools and districts is essential to sustain, scale-out, and to advance change.

This study adds value to previous research in this domain by identifying and clarifying those factors that increase the likelihood of CPD achieving its intended outcomes in Indonesia, and the benefits arising from those outcomes being sustained and scaled out.
**Executive Summary: Gender Thematic Study**

Gibson, Sam and Rasita Purba. 2020. *INOVASI and Gender Equality: Reflecting on What We Learned in Phase I and Looking Ahead to Phase II*. Jakarta: INOVASI

At the juncture between Phase I and Phase II, this study is both a look back, as we reflect on what INOVASI learned over 2016–2020, and a look ahead to how we will approach gender in the next four years. Our intended audience is internal, primarily INOVASI management and staff, and secondarily, our colleagues from the TASS program and DFAT. Unlike the themes of continuing education, disability, literacy, numeracy and problem-driven iterative adaptation (the other thematic study topics), we did not focus on gender equality in Phase I. Therefore, this study does not delve deeply into ‘what works’ for gender equality.

While INOVASI took a relatively light touch to gender in Phase I, Phase II presents the opportunity to build on what we learned and focus on two areas that we are uniquely positioned to consider from a gender perspective: educational leadership and character education. An energised contribution in Phase II means that INOVASI will need to invest in new in-house skills and forge alliances with new partners in government and civil society.

In Phase I we embedded gender in our wider gender equality and social inclusion (GESI) strategy. This strategy outlines our scope of work in the following areas: gender equality and empowerment; disability and social inclusion; and child protection. It advocates a twin-track approach for inclusion of both mainstreaming and targeting individuals and groups potentially at-risk. Key elements of this strategy included:

- Investing heavily in basic literacy for the many children who do not speak Bahasa Indonesia at home (multi-language pilots);
- Improving how teachers identify and teach children with disabilities;
- Piloting approaches in communities that have difficult educational contexts (for example, high absenteeism, low parent engagement, child labour);
- Identifying innovations that improve teaching and learning in schools in remote areas.

Although we included gender equality and women’s empowerment in the strategy and to a certain degree we have put the gender mainstreaming track in place, Phase I did not target gender equality. We have nonetheless:

- Celebrated a modest reduction in the ‘boys’ achievement gap’ in numeracy and literacy (in INOVASI pilot schools);
- Ensured that most of our data collection and analysis was sex-disaggregated (and also tracked other dimensions of disadvantage such as disability, mother tongue and socio-economic status);
- Screened all our pilot materials to ensure the final versions are ‘inclusive’ and gender-balanced;
- Periodically discussed with our team how a gender perspective is relevant in our own workplace (harassment), in operations (recruitment) and pilots (learning days).

In Phase II we intend to build on this experience and to deepen our work on gender equality with renewed commitment by taking action to:

- Involve a full-time gender specialist from the beginning of Phase II (to ensure pilot designs and policy work take account of gender from the outset);
- Ensure that we include gender-focused activities and events in the workplan and dedicate a realistic budget to support these activities;
• Seek out allies in government and civil society who can help us make wise choices about how we engage on gender;
• Explore the feasibility of designing and delivering a gender-focused pilot (grant, short-course or other) in Phase II;
• Strengthen the school leadership pilot to both improve leadership and management skills for all principals, and promote women’s empowerment;
• Consider the potential for character education to provide opportunities for children to practise values of equality, respect and teamwork – these can and should include a gender dimension.
Executive Summary: Problem-Driven Iterative Adaptation Approach Thematic Study


INOVASI adopted PDIA as its primary approach from the outset. However, the way we apply and interpret PDIA has evolved since the program began. In 2016, we used the approach primarily to conduct classroom action research and also to encourage teachers to develop a growth mindset (Dweck, 2006). At that time, INOVASI applied PDIA at the classroom level, asking teachers to identify their students’ learning problems and devise solutions. However, at the second strategy testing session in 2017 the team decided that many teachers still lacked fundamental competencies in teaching literacy and numeracy so expecting them to identify problems and solutions on their own was unrealistic. After that, INOVASI instituted a short-course approach that was itself an iteration built on knowledge from previous donor-supported education programs. Local iterations of INOVASI’s own short courses began in 2019 when local stakeholders started to adjust the content of the courses and decide how best to deliver them in their own districts.

Since 2018, INOVASI’s PDIA approach has also included a ‘thinking and working politically' component. The program works with the districts to develop more appropriate regulations to support better learning outcomes. Other aspects of the program that reflect this thinking are the team’s efforts to influence district budget allocations away from infrastructure and towards activities to improve the quality of learning and teaching. The most recent iteration is the application of PDIA at the district level. Using PDIA, INOVASI works together with district-level officials in identifying the district’s most pressing challenges.

To assess whether the PDIA approach has been effective, this study examines the evidence from the Guru BAIK pilot and the most recent Jalan Andrews pilot that is extending the use of PDIA at the district level. There are four main reasons to examine the evidence from Guru BAIK. First, Guru BAIK is the first pilot and lessons learned from this pilot have been embedded in all the other pilots. Second, by focusing on Guru BAIK we prevent any overlap with other thematic case studies that examine the other pilots on literacy, numeracy and inclusion in greater detail. Third and most importantly, Guru BAIK includes problem solving and growth mindset components. Finally, it is also the only pilot that has counterfactuals, namely the Literacy Boost and the Literacy 1 pilot, that do not include these PDIA components. The evidence shows that Guru BAIK has more impact on student literacy scores than Literacy Boost. The data also shows that teachers that benefitted from Guru BAIK before participating in the Literacy 1 pilot performed better than those who only participated in the Literacy 1 short course.

Furthermore, teachers with Guru BAIK experience contributed to higher learning outcomes among children with special needs and those from poor socio-economic backgrounds. Nevertheless, there is need for more data. The current available evidence is based only on a small number of districts.

Concerning the application of PDIA at the district level, there are some known challenges but also positive indications. One of the barriers is that PDIA requires initiative and active involvement from its counterparts but in the district bureaucracy, officials tend to prefer to wait for instructions. On some of the positive findings, officials became more data-driven in identifying problems and in looking for solutions. The application of PDIA also apparently helped to break down silos among the 6 INOVASI actors. District stakeholders became aware that addressing an education problem is not the sole responsibility of the district education office but requires collaboration with other stakeholders. Finally, while there is clarity about what PDIA means as a concept, its application is subject to
different interpretations. Indonesia already has experience with other ‘PDIA-like’ initiatives that are context-specific and seek to strengthen local solutions and decentralised decision making. These interventions have also faced cultural and political challenges. Any aid program trying to implement PDIA needs to anticipate those challenges.
Executive summary: Disability Inclusion Thematic Study


The purpose of this study is to assemble and examine early findings from the disability inclusion aspects of INOVASI’s work in Phase I. This includes a particular focus on the activities in three pilot districts (Central Lombok, Probolinggo and East Sumba), within grant-based partnerships, and in activities focused on systems and policy engagement. The study explores what has worked and not worked to improve disability-inclusive education in INOVASI, and what enablers and barriers are important to take note of in progressing Indonesia’s inclusive education reforms.

Indonesia’s legal and policy framework supports the right of children with disabilities to access a quality and inclusive education. This is most clearly outlined in Law No 8 of 2016 on Disability and the related Government Regulation No 13 of 2020 regarding Appropriate Accommodation for Students with Disabilities. Despite a supportive legal framework, various datasets, including most recently the Indonesian Bureau of Statistics 2018 national socioeconomic survey (Susenas) show concerningly low rates of school enrolment, completion and progression of Indonesia’s children with disabilities.

During Phase I, INOVASI focused on piloting disability-inclusive education capacity development programs for teachers, developing and testing the Student Learning Profile and undertaking an extensive multi-stakeholder policy analysis and development process to develop the Central Lombok Regency Inclusive Education Roadmap (2019-2021). The data used for this study was drawn from three quantitative studies and an extensive document analysis. The studies included a pre-test and post-test of teachers in the inclusion pilot schools, the Indonesian education and learning innovation survey (SIPPI) and the spot-check assessment involving classroom observations and interviews.

The study showed impressive improvements in learning outcomes among students with disabilities in the INOVASI pilot schools and highlighted the value of strengthening disability data systems and policy tools to enable inclusive education. Numerous effective strategies were identified including: the centrality of building teachers’ skills in differentiated instruction; simple and practice-based teacher training through the teachers’ working group system; investing in multi-stakeholder policy development work; working with village leaders, parents and community stakeholders; considering financial mechanisms and incentives for inclusion; and interrogating where disability data and definitions are a barrier and how they can be made into enablers.

The findings also highlighted areas where improvements are needed. This included proactively using and strengthening the work of Disabled Peoples Organisations and Disability Service Units in supporting the inclusive schools; designing pilots with a broader focus than just teacher capacity development to address the fact that most children with disabilities are out of school; building the capacity of principals and supervisors to enable accessible infrastructure, access to resources and greater support for teachers; and addressing system and teaching capacity required to implement assessments inclusively.

Further implications point to the importance of: strengthening partnerships with universities and other teacher training institutions; updating the *General Guidelines for the Implementation of Inclusive Education* to incorporate the obligations outlined in Government Regulation No 13 of 2020 regarding Reasonable Accommodation for Students with Disabilities; ongoing support to disability identification mechanisms that inform resource decisions; monitoring and evaluating the efforts of inclusive education policy development and implementation; developing a range of communications materials to increase awareness of policies and systems, such as guidance for school leaders on accessing...
resources for inclusion through BOS funding; strengthening linkages between schools and early intervention, health and specialist services; and working with communities and other stakeholders to address non-school barriers to inclusive education.
Executive Summary: Partnership Thematic Study


Since 2018, INOVASI has worked together with 20 selected partner organisations through the grant-based partnership program. The collaboration aims to test various approaches that may improve education quality, particularly in the early grades. Working with local organisations is also expected to promote sustainability of the program and its results.

INOVASI’s baseline and endline surveys reveal that the program produced promising results, for example, more supportive learning environments, improved teaching practices, increased involvement of communities and parents, and better learning outcomes. A follow-up qualitative study was conducted to provide a comprehensive understanding of how partners’ approaches and uniqueness contribute to those results.

The study cites key factors affecting the quality of learning including: the ‘teaching at the right level’ approach; ‘literate’ classroom environments; and supportive school policies. Furthermore, collaboration with teacher training institutes resulted in significant changes in the pre-service training curriculum. Also, the use of mother-tongue in the early grades meant that students who do not speak Bahasa Indonesia enjoyed a more interactive learning experience. In INOVASI’s work on inclusive education, partnerships between communities and schools improved access to education for children with disabilities. Collaboration between parents and schools also contributed to more parents becoming involved in their children’s schooling. Finally, establishing libraries in both schools and communities, supported by the distribution of child-friendly books and trained librarians increased students’ interest in reading and their reading ability.

The grant-based partnership program has also provided some promising results overall although some challenges remain. The main issue the program faced was the short duration of program implementation meaning that the beneficiaries had little time to develop the capacity to continue the program and maintain results. While some district governments have taken the initiative to scale out the programs, other districts have not. Thus relevant policies and regulations are needed to mobilise resources and sustain the promising practices generated by the partnership program.

Despite the challenges, the study outlines four mechanisms that could be used to sustain these programs: implementing them within partner schools; adoptiions of good practices by other schools that are usually disseminated through communities of practice on social media; scale out with government support; and changes within partner organisations.

This study concludes with an assessment of what works and what does not work in achieving program objectives. The lessons learned enrich INOVASI’s understanding of effective approaches to improve the quality of learning in primary schools, especially for the early grades. In addition, by citing the evidence, this study contributes to the discussion on the role of non-governmental organisations in education development.