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TECHNICAL ASSESSMENT

FOR THE

SUPPORTING ANDHRA'S LEARNING TRANSFORMATION PROGRAM

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Education Global Practice
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**ABBREVIATIONS AND ACRONYMS**

AP	Andhra Pradesh
AWP&B	Annual Workplan Plan & Budgets
CPD	Continuous Professional Development
CWSN	Children with Special Needs
DIET	District Institutes of Education Training
DIKSHA	Digital Infrastructure for Knowledge Sharing
DoSE	Department of School Education
ECE	Early Childhood Education
EMIS	Education Management and Information System
GER	Gross Enrolment Ratios
GoAP	Government of Andhra Pradesh
LMS	Learning Management System
MHRD	Ministry of Human Resource Development
NAS	National Achievement Survey
NEP	National Education Policy
PAL	Personalized Adaptive Learning
PforR	Program for Results
PMC	Program Management Consultant
RA	Results Area
SAC	SCERT Assessment Cell
SALT	Strengthening Andhra's Learning Transformation
SCERT	State Council for Education Research and Training
SLA	School Leadership Academic
SLAS	State Learning Achievement Survey



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I. Background and Context

Access to basic education and school transition rates are generally high in Andhra Pradesh (AP). There are about 63,621 schools in the state, of which about 70 percent, or 45,013 schools, are government-managed. These schools serve 3.9 million children (49.5 percent of overall enrolment) and have approximately 190,000 teachers. Elementary and secondary Gross Enrolment Ratios (GER) for all schools in the state are 86 and 82 percent respectively; and the primary to upper primary and upper primary to secondary transition rates are 97 and 96 percent respectively.

Although AP performs above the national average in student learning outcomes on National Achievement Survey (NAS), overall learning deficiencies remain a concern. The results of the most recent NAS 2017 indicate that AP performs well, and in many cases far better than most other states, across all grades (3, 5, 8, and 10) and subject areas tested. However, even though government-managed schools in AP perform above the national average across grades and subjects, the average performance of students in private schools is better than in government-managed schools. This has contributed to the gradual dip in enrolment in government-managed schools. For example, between 2015-16 and 2018-19, enrolment in government-managed schools decreased from 41.2 million to 39.0 million.

Basic education (Kindergarten to Grade 10) in AP is negatively impacted by the limited focus on foundational learning (Kindergarten to Grade 2), along with poor school infrastructure, low teacher capacity, and inefficient administration practices in government managed-schools (all grades). The state faces several key challenges in education service delivery, which are exacerbated by weak levels of institutional capacity attributable to the bifurcation of the state in 2014. Post the bifurcation, the existing state-level nodal educational institutions located in the city of Hyderabad became a part of the education system of the newly created state of Telangana. Limited access to quality Early Childhood Education (ECE) options means children don't get the right start and lack early literacy and numeracy skills. This learning gap is further exacerbated by limited teacher capacity in primary and secondary grades. Many teachers have been unable to transition from more traditional, curriculum-based teaching practices to the more desirable, competency-based approaches. Limited teacher capacity also results in the state's remedial education initiatives being significantly delayed leading to continued accumulation of learning gaps.

II. SALT Program Boundary

About 81 percent of the education budget is being used to support teacher salaries, and about 9 percent of it is being used to fund school meals, scholarships, student entitlements, and regular school operation expenditure. This limits the funding available for investments in initiatives directed at improving the quality of education. Most schools require major repairs and lack basic infrastructure and facilities. However, there is little funding available for this. The GoAP views the SALT Program as a way to address these deficiencies and transform government schools into vibrant and competitive institutions.

GoAP's Nadu Nedu initiative will address the existing gaps in school-level infrastructure and facilities and to create a conducive learning environment. The initiative seeks to provide schools with the key facilities that can explain up to 16 percent of the variance in student learning levels. Most government-managed schools in the state only offer primary education and therefore Nadu Nedu is expected to have a significant impact on enrolment in and quality of early grade education. Parent Committees (PCs) will be provided with funds to carry out infrastructure repairs and ensure that the school has: (a) functional toilets (with separate toilets for girls), (b) drinking water facilities, (c) lights and fans, (d) classroom furniture, (e) chalkboards, (f) compound walls, and (g) a smart television.

The SALT Program focuses on those aspects of the Government program that directly impact students' education outcomes across foundational, elementary, and secondary levels of schooling. While the state budget accounts for most of the expenditure, it mostly covers teacher salaries; school construction, repair and maintenance; and provision of student entitlements (free textbooks, uniforms, mid-day-meals, etc.). *Samagra Shiksha* provides most of the funding for



quality enhancement initiatives. While this funding can sustain initiatives, it is not enough for the development and rollout of large-scale transformational programs.

Government Program		PforR Program	Reasons for non-alignment
Objective	To transform government schools into vibrant and competitive institutions	To improve learning outcomes, quality of teaching practices and school management in basic education	The objective of the Program for Results (PforR) Program provides greater outcome orientation and facilitates measurability of results
Duration	Ongoing	Sep 2021 to Sep 2026	The PforR Program is directed at making strategic changes in key areas; to be sustained by the government program.
Coverage	All government-managed and private-aided schools in AP	All government-managed schools in AP	The PforR Program will only support the government-managed schools.
Results areas	Foundational learning (including ECE and school facilities); Improved quality of teaching-learning interactions (teacher professional development, capacity building of teacher education institutions, remedial education, and learning assessment); Strengthened institutional capacity for service delivery (school leadership development, community-led management of schools, institutional capacity); Universal access to elementary and secondary education (school construction, mid-day meal, student entitlements, and salaries); and Vocational education	Foundational learning (including ECE and school facilities); Improved quality of teaching-learning interactions (teacher professional development, capacity building of teacher education institutions, remedial education, and learning assessment); and Strengthened institutional capacity and Community Engagement for service delivery (school leadership development, community-led management of schools, institutional capacity)	The PforR Program will cover aspects that directly impact the quality of education being imparted in schools; are underfinanced, and are supported by institutions with weak capacity. The PforR Program excludes school construction, teacher salaries, mid-day meals, and student entitlements. There is currently enough provision of school buildings and teachers. Multiple initiatives in the area of mid-day meals, student entitlements (textbooks and uniforms), scholarships/stipends etc. are already in place. The PforR Program excludes vocational education as students demand for vocational education is low. It is not a priority area for the state. Pilot initiatives would be required to develop a scalable model.
Overall Financing	US\$12.8 billion	US\$1 billion	

III. Program Expenditure Framework

The SALT Program accounts for about 7.8 percent of the overall government program, and 77 percent of it will be financed through counterpart funding. A high share of counterpart financing will help ensure the sustainability of initiatives. The overall sustainability will be further enhanced by the fact that over the past three years, the state's school education budget has been growing at about 7 percent per annum. Additionally, at least 34 percent of funds under the SALT Program are expected to be utilized for school-level facility upgradation. This non-recurring expenditure is expected to conclude in the first two years, and this would gradually free up more than enough funds for sustaining other interventions, and for maintaining (and over time replacing) the facilities created/provided through the *Nadu Nedu* initiative. The expenditure efficiency under the Program will be enhanced by three aspects (a) the structure that the initiation of a results-oriented AWPB process would bring to the way nodal institutions plan and budget for interventions/activities; (b) the significant use of technology to enhance coverage under teacher training, school leadership development and remedial education initiatives, and for data collection and monitoring; and (c) the increase in enrolment due to the *Nadu Nedu* initiative leading to a reduction in per-pupil expenditure. These aspects will also



positively impact the efficiency of the larger government program.

Efforts to further improve overall expenditure efficiency under the government program can help free up more funding to sustain the activities initiated under the SALT Program. For this, the Program will leverage a comprehensive system-level analysis using the 'FinEd' toll developed by the Governance Global Practice of the World Bank and a Public Expenditure Review that covers the various decentralized levels of service delivery (state, district, block, and schools).

Source	Amount (US\$Million)	Percentage
Overall government program (Including SALT Program)	12,824	
Of which, state budget (Including <i>Nadu Nedu</i> initiative)	11,478	89.5 percent
Of which, <i>Samagra Shiksha</i>	1,346	10.5 percent
SALT Program	1,000	
Counterpart Funding	770	77 percent
Of which, state budget (<i>Nadu Nedu</i> ¹ initiative only)	340	
Of which, <i>Samagra Shiksha</i> ²	430	
International Bank for Reconstruction and Development (IBRD)	230	23 percent
IPF 'Capacity Building' component supporting SALT Program	20	

#	Budget Head	Result Area	Five Year Expenditure Projection (US\$ Million)						
			FY 2020	Y 1	Y 2	Y 3	Y 4	Y 5	Total
1	Teacher Salaries		2,064	2,064	2,064	2,064	2,064	2,064	10,320
2	School Infrastructure and Facilities								
	2a. Opening of New/Upgraded Schools		6	6	6	6	6	6	30
	2b. Strengthening of Existing Schools (<i>Nadu Nedu</i>)	RA - 1	400	170	170	-	-	-	340
	2c. School Maintenance and Operation Cost		8	8	8	8	8	8	40
3	Scholarships, Transport Allowance, Mid-day Meal, Textbooks, and Uniform		194.4	194.4	194.4	194.4	194.4	194.4	972
4	Assistance to Private-Aided Schools		54	54	54	54	54	54	270
5	Funds for Quality (Including remedial and bridge education)	RA - 2	75	92.5	92.5	60	60	60	365
6	Teacher Education Institutions and Teacher Training								
	6a.TEI Salaries		3	3	3	3	3	3	15
	6b.TEI Infrastructure, Maintenance & Operational Expenses	RA - 2	1	1	1	1	1	1	5
	6c. Teacher Educators Professional Development	RA - 2	4	4	4	4	4	4	20
	6d. In-service Teacher Training and Head Teacher Training	RA - 2/3	8	11	11	6	6	6	40
7	Management Cost								
	7a. Salaries and Office Operation		27.8	27.8	27.8	27.8	27.8	27.8	139
	7b. EMIS and Education Technology	RA - 3	1	1	1	1	1	1	5
8	Academic Support through BRCs and CRCs	RA - 3	29	29	29	29	29	29	145
9	Vocational Education		7.8	7.8	7.8	7.8	7.8	7.8	39
10	Support at Pre-Primary Level	RA - 1	3	5	5	5	3	2	20
11	Assessment at National and State Level	RA - 2	1	5	3	5	2	5	20
12	Provision for Children with Special Needs	RA - 2	7	5	5	10	10	10	40
Total (Government Program)			2,896	2,688.5	2,686.5	2,486.0	2,481.0	2,483.0	12,824
Total (SALT Program)			NA	323.5	321.5	121.0	116.0	118.0	~1,000
IBRD Share³			NA	72.175	60.5	45.7	11.5	39.5	229.375

¹ Only non-recurring head of expenditure

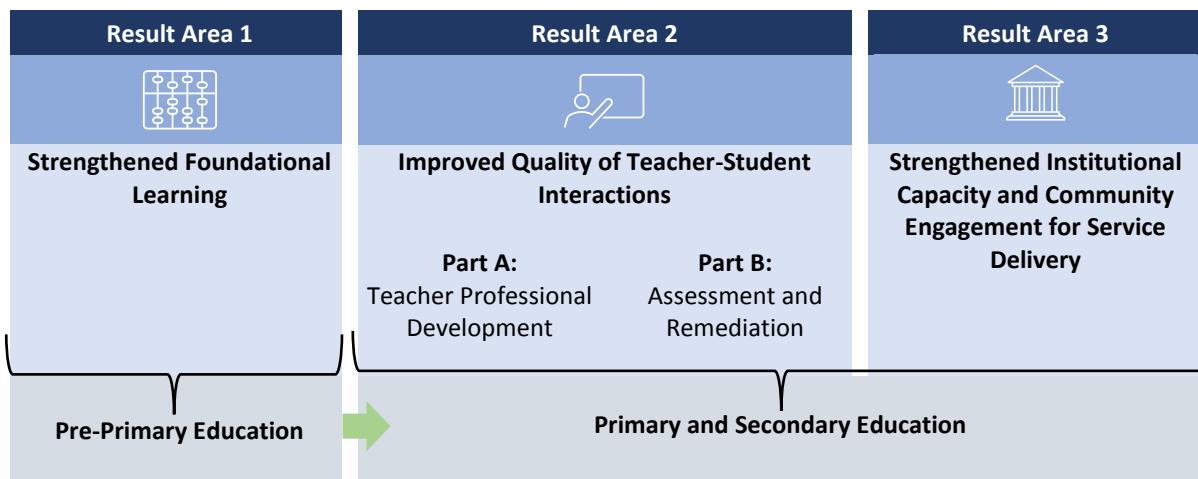
² Excluding teacher salaries, student entitlements, mid-day meals, greenfield infrastructure and vocational education

³ Excludes expenditure under IPF component and 'other costs' as reflected in the PAD data sheet



IV. Result Areas (RA)

SALT seeks to strengthen the quality of foundational learning to provide children with a strong start to schooling and then further sustain early gains and address existing learning poverty by improving the quality of teacher-student interactions across all grades. This will be achieved through the provision of appropriate teacher professional development opportunities and remedial education linked to technically sound state-level and school-based assessments. SALT also supports the strengthening of the institutional capacity required to achieve these results.



A. RESULT AREA 1: STRENGTHENED FOUNDATIONAL LEARNING

ECE consisting of an enabling and stimulating environment makes a positive contribution to children's long-term development and life-long learning. A high-quality preschool program provides a strong foundation for children's learning and development in the early years. About 90 percent of brain development has already taken place by the time a child is six years of age making the early years a particularly crucial stage for intervention. Recent evidence from an Indian study confirms that a good quality ECE programme during these critical years can lead to the child's holistic development, which in turn leads to improved levels of school readiness which finally leads to higher learning levels in the primary grades.⁴ Children that attend preschool have higher school completion rates, lower repetition rates, higher scores in reading and math and higher labour market productivity.

Ministry of Education's recognition of pre-school through the *Samagra Shiksha* program and the New Education Policy (NEP) 2020 is a promising step toward ensuring quality early childhood education for all children. In 2018, India's Ministry of Human Resource Development (MHRD) introduced an Integrated Scheme for School Education called *Samagra Shiksha*. The scheme is an overarching programme that treats school education as a continuum from pre-school to class 12, subsuming the three existing schemes of *Sarva Shiksha Abhiyan*, *Rashtriya Madhyamik Shiksha Abhiyan*, and Teacher Education. As part of its endeavour to improve the availability and quality of pre-school education through Samagra Shiksha, the MHRD supports States and UTs to implement the following two models of pre-school: (i) Pre-primary sections in government primary schools and (ii) Physically co-located ICDS Anganwadi Centres in government primary schools. Additionally, the National Education Policy has further provided guidance on these models of ECE and reinforced the importance of providing a strong foundational learning program to young children.

Under the SALT Program the Government of Andhra Pradesh (GoAP) is committed to providing a high-quality foundational learning Program through its primary schools and the vast network of *Anganwadis*. The GoAP has wholly

⁴ CECED. (2016). *Indian Early Childhood Education Impact Study: Quality and Diversity in Early Childhood Education*. New Delhi: Ambedkar University.



aligned with the model/approach for foundational learning proposed by the NEP (2020). The Department of School Education (DoSE) and the Department of Women, Child, Disabled and Senior Citizen (DoWCDSC) have established a partnership under which the State Council for Education Research and Training (SCERT) will support the DoWCDSC in delivering the ECE Program in about 55,000 Anganwadis. For school readiness to improve, there needs to be a clear pedagogical continuum between the ECE delivered through Anganwadis, and the early grades in primary schools. The state is introducing a one-year preparatory class across 3,530 schools located in administrative blocks with a high percentage of ST students. This approach has been deliberately selected to promote equity as learning outcomes for ST students are relatively lower. Poor foundational learning has been identified as a key reason for this. Special attention would need to be provided in helping ST students transition from their mother tongue to the regular medium of instruction in schools.

Improvement of young children's school readiness will happen through a comprehensive and integrated package of developmentally appropriate interventions. While the state has identified and developed effective channels for ECE delivery, SALT would create a transformation roadmap and a cohesive framework for its implementation. Through SALT, the state would deliver an integrated package of developmentally appropriate interventions including a curriculum, teaching-learning material, teacher capacity development opportunities, monitoring systems, parental engagement strategies, and institutional linkages at the decentralized level.

				
Development of a Transformational Roadmap for ECE in the State	Development of an Integrated Package including Teaching-Learning Material	Capacity building of the Anganwadi workers and Early Grade Teachers	Enhancement of Classroom Learning Environment	Institutional Linkage between DoSE and the DoWCDSC
Establishing a pedagogical continuum between the ECE offered by Anganwadi centres and the early grade education offered in primary schools.	Supporting the provision of TLM that consists of a set of rich, stimulating, and developmentally appropriate tools that are high impact, low cost, and relevant.	Supporting the development and provision of a short-term training course to the Anganwadi workers (55,000 Anganwadis), and teachers teaching the early grades (38,000 schools)	The <i>Nadu Nedu</i> initiative is expected to complement the academic initiatives and significantly impact early grade education by creating a stimulating learning environment for young learners.	The departments will jointly implement the activities under the SALT Program and hence, coordinate at several levels, including the district and sub-district levels.

As a first step, a review of the existing preschool and early grades curriculum and pedagogical practices to align them to curriculum or grade level competencies suggested by the National Council of Education Research and Training will set a strong foundation. This exercise will inform the development of the integrated package, including the Teaching Learning Material (TLM), monitoring systems, parental engagement, etc. Complimentarily, *Anganwadi* workers and teachers will also be provided with guidebooks to help them transition from a curriculum-based to a competency-focused and play-based model of teaching-learning. It would be important to ensure that the support provided in these areas focuses on the holistic development of the child. It should include all developmental domains: cognitive development and pre-numeracy skills, language development and emergent literacy, creative expression and aesthetic appreciation, socio-emotional development, and fine and gross motor skills. Further, the curriculum should include clear age-appropriate developmental milestones to facilitate developmentally appropriate teaching. Finally, the TLM should consist of a set of rich, stimulating, and developmentally appropriate tools that are high impact, low cost, and relevant.

Capacity building of the Anganwadi workers and preparatory and early grade teachers is the most critical lever for change. Provision of practical and high-quality teacher training is essential for realizing the shift from curriculum-based teaching-learning to play-based, developmentally appropriate teaching-learning across ECE and early grades. As per the NEP (2020), *Anganwadi* workers should go through a six-month certificate training Program. SALT would provide the same and extend the recommendation to cover early grade teachers through a similar albeit shorter training Program of three-months. The state intends to provide these trainings through a blended learning model. This is made possible by the fact



that all *Anganwadi* workers and school teachers have access to digital devices with data connections. SALT will support the planning, delivery, and monitoring of these training programs. It would be important that the training aligns with the new play-based curriculum. Ideally, it should spread across multiple years and be scaffolded to ensure teachers get the time to implement learnings from the trainings and provide feedback that can be rooted back into the modules for the subsequent year(s). It would also be essential that the training package covers aspects related to parental engagement to positively influence the home learning environment for the child.

The synergy between the DoSE and the DoWCDSC will be crucial for the delivery of the ECE Program. The DoSE and the DoWCDSC have already established a strategic convergence under which the SCERT supports the DoWCDSC on all aspects related to ECE, including curriculum design, training of *Anganwadi* workers, and TLM development. The departments will jointly implement the activities under the SALT Program and hence, coordinate at several levels, including the district and sub-district levels. Given that the SCERT itself has limited capacity in the area of ECE, it would be advisable to engage a partner organization that can help build its capacity whilst supporting the roll-out of the activities envisioned under the Program. Herein, the agency could emerge as a further medium of convergence that establishes a unit each at the SCERT and the DoWCDSC, and also deploys resources who work with decentralized functionaries from both the departments.

The *Nadu Nedu* initiative is expected to complement the aforementioned initiatives and significantly impact early grade education by creating a stimulating learning environment for young learners. The state has more than 30,000 primary schools where early grade learning is delivered. The state will improve school safety, classroom learning environment, and the provision of basic facilities such as toilets and drinking water in these schools. This infrastructure up-gradation will provide the necessary foundation for more advanced academic reforms aimed at improving students learning experience. Community involvement in the planning, management, and monitoring of works will play a pivotal role in ensuring quality. It will help build parents confidence that the school can provide a safe and comfortable learning environment for their child and help improve enrolment in government-managed schools. Physical parameters such as natural light, temperature, and air quality contribute significantly to the space and ability to function for young children. These should be considered during the planning and implementation of works. Lastly, the works undertaken should aid in delivering developmentally appropriate pedagogy, including integration of play-based methods and outdoor play.

B. RESULT AREA 2: IMPROVED QUALITY OF TEACHER-STUDENT INTERACTIONS

PART 1: TEACHER PROFESSIONAL DEVELOPMENT

Under the SALT Program, the GoAP is committed to providing high-quality professional development opportunities to teachers. The GoAP recognizes that teachers are the most important school-based factor for student learning and that teachers can make decisive changes in the lives of the students they teach (Beteille and Evans, 2019; Hanushek and Rivkin, 2010; Chetty, Friedman, and Rockoff, 2014). For students to learn, teachers need to be present, motivated to teach, have adequate content knowledge, and instruct effectively. However, currently in AP, access to opportunities for continuous professional development needs to increase to unlock the full potential of teachers. Although the state has taken major steps to address issues related to insufficient human resources and created communities of practitioners through the school complex/cluster model, AP has yet to establish a demand-driven continuous professional development apparatus.

The GoAP is proposing a series of actions to strengthen in-service teacher professional development, ensuring teachers are provided with need-based support. Much of teacher training is one-off, with little to no follow-up coaching in the classroom. It will be important for the GoAP to provide individually targeted and repeated teacher training, with follow-up coaching, as this has been identified as among the most effective characteristics of effective TPD Programs. Moreover, Programs that link participation to career incentives, have a specific subject focus, incorporate lesson enactment in the training, and include initial face-to-face training tend to show higher student learning gains (Popova et al., 2019). To provide such training meaningfully, the project will: (i) build the technical and operational capacity of SCERT and District Institutes of Education Training (DIETs) to provide evidence- and needs-based support to teachers through an Learning Management System (LMS); (ii) build the technical and operational capacity of school complex leaders to provide



evidence- and needs-based training to teachers; (iii) introduce a classroom observation tool to formally encourage professional learning and growth; and iv) strengthen the technical and operational capacity of SCERT and DIETs to provide supplementary teaching-learning material to teachers.

			
Providing Need-based- and Blended-Teacher Professional Development	Developing the School Complex Ecosystem	Institutionalizing a Classroom Observation Tool	Providing Supplementary Teaching-Learning Material for Teachers
The introduction of a teacher needs diagnostic system along with a Learning Management System	Build the technical and operational capacity of school complex leaders to provide evidence- and needs-based coaching to teachers	School complex leaders and senior teachers will learn how to conduct classroom observations using a digitized version of the TEACH tool, provide feedback, and facilitate coaching sessions.	Provide teachers with a digital guidebook aligned to the training curriculum, which will include short modules (e.g., 'quick tips' and/or videos of exemplary instruction)

The introduction of a teacher needs assessment system can further ensure that the professional development teachers receive is demand-driven and appropriately regulated. Although the GoAP has established strong institutional linkages from the state to district and sub-district levels for planning, monitoring, and management of teachers, information on teacher performance is limited and there is no standardized system for regularly gathering information on teacher professional development needs. This system will work to ensure teachers are provided with professional development opportunities that respond to their needs, supporting the development of a range of skills based on classroom observations, including, but not limited to, pedagogy, digital pedagogy, remedial instruction, formative assessments, content knowledge, technological capability, resilience, and socioemotional skills. The state will support the SCERT and DIETs in the i) development of clear standards for what students must know and be able to do; ii) development of clear standards for teachers that outline official tasks related to instructional improvement; iii) operationalization of a system to record training needs expressed by teachers and utilize observational data to identify and appropriately target teacher professional development needs; iv) development of approaches for on-site training and on-site/remote support based on teachers' needs; and v) utilization of classroom observations, periodic assessments, and self-evaluations to create a teacher performance evaluation system that is linked to existing systems that track teacher data and training delivery.

In addition to traditional training, teachers will be provided with evidence- and needs-based support through an LMS, building off the success of Digital Infrastructure for Knowledge Sharing (DIKSHA). The DIKSHA platform offers a host of online training courses where more than 1.5 million teachers have been registered. This LMS will build upon the success of DIKSHA to support the enhancement of needs-based continuous professional development and teacher performance management to improve classroom performance. Given the large number of teachers that will need to be trained in a relatively short period and limitations of group sizes associated with COVID-19, an LMS will be developed to complement other trainings.

Improvement of school complex leaders' technical capacity will ensure they are better positioned to provide evidence- and needs-based support to teachers. Continuous professional development programs are most likely to be effective when teachers are provided with the materials, ongoing training, and monitoring to change their practice, and where it is politically feasible to target teachers for training based on pedagogical gaps. To ensure these trainings are relevant, teachers' professional development needs will be determined at a school complex/cluster level (40-50 teachers). This training plan will be designed based on data/information from state and school-level assessments, findings from the classroom observations, and teacher self-assessments. This information will be used to create a training curriculum that is firmly based on the areas teachers require the most support in. In addition to the training, teachers will receive coaching on pedagogical skills that will, when possible, leverage technology for follow-up. The use of technology is a promising avenue in AP, given high rates of digital literacy (as indicated by teachers' high course completion rates on DIKSHA) and widespread access to digital devices. The state should leverage this to provide teachers with a digital guidebook aligned



to the training curriculum, which will include short modules (e.g., ‘quick tips’ and/or videos of exemplary instruction) to complement peer-to-peer learning and classroom-based coaching. This can also be leveraged to set up school complex-level social media groups to facilitate peer-to-peer learning. School complex leaders should be trained to provide pedagogical support to teachers that are i) tailored, or targeted to the areas in which teachers need the most support, ii) practical, or involve active learning strategies that have been shown to improve adult learning and retention, iii) focused, or targeted to a select set of skills that make it more likely to result in meaningful change, iv) ongoing, or incorporate the need for continuous support over a sustained period to ensure that new skills and knowledge are consolidated and internalized. As part of this training, school complex leaders and senior teachers will learn how to conduct classroom observations using a digitized version of the Teach tool, provide feedback, and facilitate coaching sessions.

In parallel, students will have access to remedial support through online learning materials, which will be designed to complement classroom learning. The state has already used the DIKSHA platform to offer a host of online training courses for students. The GoAP will utilize formative and summative assessment data to identify hard-spots or prioritized learning objectives across grades and subjects to curate or create content. These findings will be utilized to create multi-modal content with synchronous/asynchronous capability that is aligned to the curriculum and linked to the current ‘energized textbooks initiative.’ Complementary guidebooks and reference material will be developed for teachers to further reinforce the use of these materials across all grades. Lastly, teachers will be provided with the necessary technological and digital pedagogical training to utilize these materials as part of their instruction.

PART 2: ASSESSMENT AND REMEDIATION

The GoAP is proposing two sets of actions to strengthen assessment and remediation in government schools: (i) improving teachers’ capacity to design and use assessments to support learning and remediation in individual classrooms, and (ii) strengthening system-level assessments as an evidence source for policymaking and reform. These classroom and system-level assessments will be underpinned by a common set of competency-oriented academic standards. There will be a focus on using technology to enhance the design, delivery, analysis, and reporting of classroom and system-level assessments, and on using the data from these assessments to close learning gaps. These priorities are highly appropriate given current teaching practices and learning levels in the state. However, to achieve them, the state will require assistance from technical experts who can provide high-quality inputs and help build institutional capacity.

In the area of classroom assessment and remediation, the emphasis will need to be on:

- a. training teachers, and those who work with them, in how to develop competency-based assessments for diagnosing learning issues at the classroom level and using the results to plan instruction and remediation;
- b. creating and rolling out a holistic student report card that provides competency-oriented data on a student’s progress in a variety of cognitive and non-cognitive areas; and
- c. piloting a technology-enabled Personalized Adaptive Learning (PAL) system to demonstrate its potential to deliver remediation and learning support to students.

At the state level, the emphasis will need to be on:

- a. building the capacity of the State Assessment Cell (SAC) (and its district-level equivalents) to develop, implement, analyze, and report on data from multiple cycles of the National Achievement Survey (NAS), the State Learning Achievement Survey (SLAS), and other large-scale assessments;
- b. capacity building of SAC staff in how to design and carry out periodic benchmark/check-in assessments that provide standardized data to teachers to support remediation and competency-based learning; and
- c. enhancing SAC staff capacities in the areas of formative and diagnostic assessments so that they can provide support to teacher training in this area.



SCERT has already developed competency-oriented academic standards for all subjects and grade levels. It will be important to conduct an independent expert review of these standards to ensure they are optimally designed to promote competency-oriented teaching, learning, and assessment. Support also will be required to enhance the state's assessment dashboard so that it covers all grades and subject areas and allows for more flexibility at the classroom level in terms of the kinds of evidence that can be uploaded and the kinds of devices that can be used to do this uploading.

C. RESULT AREA 3: STRENGTHENED INSTITUTIONAL CAPACITY AND COMMUNITY ENGAGEMENT FOR SERVICE DELIVERY

The GoAP recognizes that the effective implementation of the Program will depend on the capacity of its institutions and decentralized education functionaries. The state has undertaken several reforms in areas of school leadership and management. Despite such progress, the delivery of the SALT Program will also require the development of processes and systems that aid officials in planning, delivering, and monitoring the planned activities. The DoSE has already mapped the implementation ecosystem, defined clear responsibilities for all actors involved, and streamlined the relationships between several stakeholders. The state is now proposing several reforms to address the persisting challenges on school leadership and management. Some of the key activities that will be covered under SALT are; (i) improving community oversight on school operation; (ii) supporting school leaders with the professional development Programs required to make them more proficient on key leadership competencies; (iii) developing an EMIS for improved data management and decision making; (iv) encouraging a system of AWPB for the SCERT, State Institute of Education Management and Training (SIEMAT) and DIET staff so that they have greater flexibility to deliver results (v) improving disaster risk management capacity of school leaders through the provision of adequate training.

			
Facilitating School Audits through Parent Committees	Training School Leaders on a Competency Development Framework	Capacity Building of CRCs/BRCs with a focus on Annual Planning and Budgeting	Launching a robust education-Management and Information System
Facilitate the roll out of periodic, community led social audits of schools using a digitized tool.	Developing a school leadership competency framework that identifies the skills and mindsets needed to discharge a school leader's academic and administrative duties.	Align the AWPB process with the results envisioned under the Program and ensure that the process is bottom-up to provide district level institutions the contextual flexibility.	Develop a robust EMIS, which will be the anchor for all data collection, analysis, and visualization needs in the state

PCs can play a significant role beyond the implementation of *Nadu Nedu* by facilitating transparent and holistic social audits of schools. The state has already activated PCs for the large-scale roll-out of the *Nadu Nedu* initiative. This has increased the community's confidence in government-managed schools, is re-enforcing the idea that the schools belong to the community, and is helping in maintaining a high level of transparency and accountability. The PCs provide a unique opportunity for citizen engagement, given their status as unbiased stakeholders. Building on these positive developments, the SALT Program will facilitate the roll-out of a system of periodic, community-led social audits of government-managed schools.

Community involvement in school management is a promising intervention recognized in the 'Smart Buys' report and is a very cost-effective strategy for gathering data on schools. However, for community involvement to have a real impact on schools' improvement, a few guiding principles are necessary preconditions. Firstly, the school performance evaluation rubric needs to be clearly defined and representative of the various aspects of school operation. The parameters should comprise of critical success factors for the stable and high performance of a school and be based on existing national and international school transformation frameworks and the local context of the state. There should be a focus on learning, equity, and sustainability, including the education of Children with Special Needs (CWSN). Secondly, competencies that are crucial for undertaking such an audit should be identified, and subsequently, PCs should be trained on the same. Lastly,



the tool should be digitized for the easy collection and record of data. Data should only be compiled at the aggregate level to ensure candid feedback.

School leadership development has the potential to elevate the performance of government-managed schools in AP. Under the SALT Program, the GoAP intends to focus on the development and provision of sufficient opportunities for professional development for school leaders. Given the state's prioritization of school complex (cluster) based professional development of teachers, the government intends to focus on both academic and administrative functions. In the past, the DoSE has facilitated a few standalone school leadership development Programs with support from the National Institute of Educational Planning and Administration. However, this one-time, five to 10-day training program can only be considered fit for a basic orientation. The GoAP has recently established a School Leadership Academic (SLA) under the SIEMAT. The SLA organizes a one-month leadership development course, and since its inception has trained 200 school leaders. Capacity building of school leaders leads to improved schools' management, enhanced school-level monitoring, effective mentorship to teaching and non-teaching staff, development of the learning environment, and improved student learning outcomes. School leaders need advanced skills to facilitate the many functions of running a school efficiently and effectively. Their academic role includes monitoring, coaching, and developing teachers, ensuring the fair administration of state assessments and delivery of curricular and co-curricular activities. On the other hand, their administrative role includes running the school budget and operations, liaising with stakeholders including parents, front line administrators, and contractors, distribution of entitlements, and facilitating data collection for the state. While the state continues to deliver training and skill-building Programs, these endeavors should be based on achieving improvements on clearly defined leadership competencies. Training provision should then be rooted in periodic skill gap analyses. The SALT Program aims to plug in this gap by developing a school leadership competency framework that identifies the skills and mindsets needed to discharge a school leader's academic and administrative duties. While the state is developing this framework, three key principles should be kept in mind. Firstly, the school leadership competency framework should be holistic and include multiple facets of leadership. These include skills such as school management, communication skills, interpersonal skills, coaching, facilitation, managing people, active listening, project management, planning and execution, and analytical thinking. Secondly, it should be accompanied by the organization of periodic skills assessment tests.

Robust state systems, decentralized planning, and tech-enabled monitoring systems can support PCs and School Leaders in the reform of schools. The state is implementing a three-pronged strategy to develop state systems, including capacity building of frontline administrators, supporting the development and execution of Annual Workplan Plan & Budgets (AWPB), and creation of an Education Management and Information System (EMIS). Under the capacity-building efforts, the state is training Mandal Education Officers and Cluster Resource Center Coordinators on the nuances of school management, administration, and governance. Under the development and execution of AWPBs, the state will focus on effective planning, funds flow, and funds utilization to achieve predefined goals/outcomes. It would be useful to align the AWPB process with the results envisioned under the Program and ensure that the process is bottom-up to provide district-level institutions the contextual flexibility to deliver better services. The process should ideally be made more accountable by instilling a system to solicit end-user or beneficiary feedback. Lastly, the state plans to develop a robust EMIS, which will be the anchor for all data collection, analysis, and visualization needs in the state. For the successful implementation of an EMIS, it must be ensured that it doesn't lead to monitoring fatigue, prioritizes relevant information, and doesn't duplicate the work of ground-level functionaries. Additionally, a robust EMIS should focus on administrative and academic data and provide analysis under all essential sub-domains, including enrolment and attendance, teacher performance, student learning data, infrastructure, and equity.

V. IPF Component

The PforR Program will be completed by an IPF component that will focus on facilitating the provision of capacity-building support to the state's nodal educational institutions. This will be managed through the need-based engagement of technical experts. The support provided by these experts will help in designing teacher professional development materials and guidebooks, resource materials for remedial education of academically weak students, and the



development of student learning assessments. In all cases the materials and resources developed would be required to align with national guidelines, legislation, and curriculum and learning competency frameworks; including aspects related to inclusive education for CwSN. The IPF component will also support the contracting of a software development firm for creating the state's EMIS, the engagement of a Program Management Consultant, and for hiring an Independent Verification Agency.

VI. COVID-19 Responsiveness

The learning disruption due to the COVID-19 pandemic is expected to have led to learning losses which would have a significant negative impact on the learning adjusted years of schooling across countries. The Program will focus on providing immediate access to the remedial education support required to reverse these learning losses. The state has reopened all schools while ensuring safety through the provision of sanitizers and masks, and by carrying out emergency maintenance and repair of toilets, hand washing points, and drinking water facilities. However, given the prevailing uncertainty around the impact that the COVID-19 pandemic will continue to have on the school calendar (including prolonged school closure due to an increase in caseload), the Program will invest in the strengthening of channels for home-based learning. The state has initiated a first level of response by activating multiple high-tech, low-tech, and no-tech channels of remote learning. The Program will prioritize the further enhancement of the content and materials being used to facilitate home-based learning, and roll out innovative models for improving access to digital and/or television broadcasted lessons. The focus will be on ensuring complementarity of channels so that parents have access to regular guidance for better supporting their child's learning. This will include home visits by teachers, and television and radio broadcasts linked to physical learning kits distributed by the state. The SALT Program will focus on 'Resilient Recovery'. The COVID-19 pandemic has provided an opportunity to reassess service delivery and nudged the adoption of measures that can lead to long term gains:

- a. **Technology to empower teachers (Linked to RA-2):** SALT aims to reach all teachers with a robust online LMS built on Gol's DIKSHA platform. The system will be designed to cater to the varied professional development needs of teachers including courses on remote learning pedagogy, safety measures, and using ICT in education
- b. **Technology to Personalize Learning (Linked to RA-2):** SALT will facilitate technology-assisted periodic assessments with corresponding remedial resources to allow for teaching-learning that caters to each student's learning needs. This will help address the learning poverty further accentuated by the COVID-19 pandemic. PAL, a more advanced, artificial intelligence-backed form of this approach will be rolled out across select schools. Finally, the Program will support the development of an online application to host video lessons to allow for self-paced learning.
- c. **Technology to connect learners anywhere, anytime (Linked to RA-1):** SALT will identify prioritized learning objectives across grades and subjects, curate content, and use multiple modes of communication (online, television, radio, and physical kits) to deliver this content to students. Under the *Nadu Nedu* initiative, it will support the provision of smart televisions to schools and leverage the same to improve access to online learning.
- d. **Technology as a gamechanger in management (Linked to RA-3):** The Program will facilitate better management and monitoring of service delivery by developing channels to record, analyze and report beneficiary voice. The resulting information symmetry will help facilitate greater results orientation and accountability.

VII. Alignment with India's NEP (2020) and Smart Buys

The SALT Program seeks to focus on underfinanced results areas that can directly contribute towards improving the quality of teaching and learning in government-managed schools. Expenditure efficiency and activity effectiveness are twin considerations that should be used to guide the Program design. In this direction it is important the Program results and the underlying activities are selected based on three considerations: (i) alignment with India's NEP (2020), (ii) international and national evidence of what works to improve student learning, with a focus on cost efficiency, and (iii)



the opportunity to leverage existing materials, tools and frameworks. The Program RAs and activities are directly in agreement with the new NEP (2020). ECE, formation of school complexes, prioritization of competency-based assessments, and continuous teacher professional development are focus areas under the NEP and are integral to the Program.

	NEP Recommendation	Alignment with SALT
Foundational Learning	<ul style="list-style-type: none"> - The new pedagogical structure recommends moving to a 5 + 3 + 3 + 4 system where in the first five years should be a cohesive foundational learning continuum comprising of three years of preschool education (Age 3 to 6) and two years of primary school education (Age 6 to 8). - “Anganwadi workers/teachers with qualifications of 10+2 and above shall be given a 6-month certificate programme in ECCE.” 	<ul style="list-style-type: none"> - The SALT operation will support the development of a professional training course for all early grade teachers including Anganwadi workers. - The SALT operation will support Early Childhood Education for children from age three to age eight to ensure a smooth transition from Anganwadis/ECE classrooms to primary school classrooms.
Institutionalising School Complexes	<ul style="list-style-type: none"> - “Establishment of a grouping structure called the school complex, consisting of one secondary school together with all other schools offering lower grades in its neighbourhood including Anganwadis, in a radius of five to ten kilometres.” 	<ul style="list-style-type: none"> - School complex leaders will be trained on developing a community of teachers and diagnosing teacher training needs. - School complex leaders and other senior teachers will be trained on conducting classroom observations to support teachers with continuous mentorship.
Teachers Continuous Professional Development (CPD)	<ul style="list-style-type: none"> - “Each teacher will be expected to participate in at least 50 hours of CPD opportunities every year for their own professional development, driven by their own interests.” - The use of technology platforms such as SWAYAM/DIKSHA for online training of teachers will be encouraged, so that standardized training programmes can be administered to large numbers of teachers within a short span of time. 	<ul style="list-style-type: none"> - The program will support the development of CPD courses on DIKSHA which are need-based and rooted in the context of Andhra Pradesh. These courses will be delivered on the needs diagnosed by the School Complex leaders and teachers will have the flexibility to design their own learning trajectory. Offline in-service training will also be reformed to reflect teacher needs and will be aligned to the courses available on DIKSHA.
Assessment Reform	<ul style="list-style-type: none"> - A progress card to be shared with parents that will be a holistic, 360-degree, multidimensional report - “AI-based software could be developed and used by students to help track their growth through their school years based on learning data and interactive questionnaires.” 	<ul style="list-style-type: none"> - The program will support the creation and sharing of holistic student report cards that provide competency-oriented data on a student’s progress in a variety of cognitive and non-cognitive areas. - A PAL initiative will be rolled out in all residential schools to demonstrate its potential to deliver remediation and learning support to students.
Inclusive Education	<ul style="list-style-type: none"> - “Create enabling mechanisms for providing Children With Special Needs (CWSN) or Divyang, the same opportunities of obtaining quality education as any other child.” 	<ul style="list-style-type: none"> - All CWSN centres in the state will be provided with essential facilities and refurbished to enhance the learning environment.

The priorities of the Program also align well with those identified in the recent World Bank study, “Cost-effective approaches to improve global learning”. The study outlines a list of recommendations called ‘Smart Buys’. As can be seen in the table below, many of the ‘Smart Buys’ are incorporated in the SALT Program.

Smart Buy	Description	Alignment with SALT
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Giving information on the benefits, costs, and quality of education	Providing information on the income-earning benefits of education; on sources of funding available, and the quality of local schools has increased attendance and learning at low cost.	SALT will put in place a process of community-led social audit of schools using a standardized tool. Each school's performance report will be made accessible to parents. Also, auto-generated student report cards created through the newly formed EMIS will be used for improving communication with parents.
Structured lesson plans with linked materials and ongoing teacher monitoring and training	Where primary school teaching focuses on rote learning, and teacher knowledge is low, step-by-step lesson guides as part of a multifaceted instructional Program can help improve pedagogy. However, overly scripted teachers' guides are less effective than more simplified guides.	SALT will support the development of teacher guidebooks for all grades and subjects. These will be linked to teacher professional development platforms and opportunities. Institutionalising the TEACH tool will help facilitate classroom observation-based coaching and mentorship of teachers by senior faculty and school leadership.
Target teaching instruction by learning level, not grade	Providing targeted help for students who are falling behind, and grouping children based on their learning level. This can be implemented during school, make-up classes after school, or during holidays.	The Program will support the creation of a digital platform to support teachers in carrying out periodic, school-based student learning assessments to diagnose their learning levels. It will also help them develop remedial education plans for each child, and access remedial education resources/materials.
Using software that adapts to the learning level of the child	Using adaptive or self-paced software that targets learning to the level of an individual child can be highly cost-effective.	The IPF 'Capacity Building' component will be leveraged to procure and provide a Personalised Adaptive Learning solution to students from 700 residential schools.
Pre-primary education	Since children tend to arrive at school with very lower levels of school readiness, improvements to preschool improve learning outcomes in school.	SALT focuses on improving facilities for ECE, supporting the convergence between the DoSE and the DoWCSSC, developing certification courses for preschool educators and <i>Anganwadi</i> workers among other interventions.

Lastly, the Program leverages the World Bank's TEACH tool to facilitate classroom observation-based coaching of teachers. Also, through the IPF component, SALT provides nodal educational institutions with the opportunity to engage partner institutions for the delivery of services. In doing so it allows them to leverage the expertise of non-state actors that have existing resources, materials, tools, and frameworks which have been tested and evaluated at scale.