NITI Aayog

DMEO — DEVELOPMENT MONITORING AND EVALUATION OFFICE

Evaluation of Centrally Sponsored Schemes

Best Practices Compendium:
Human Resource Development Sector
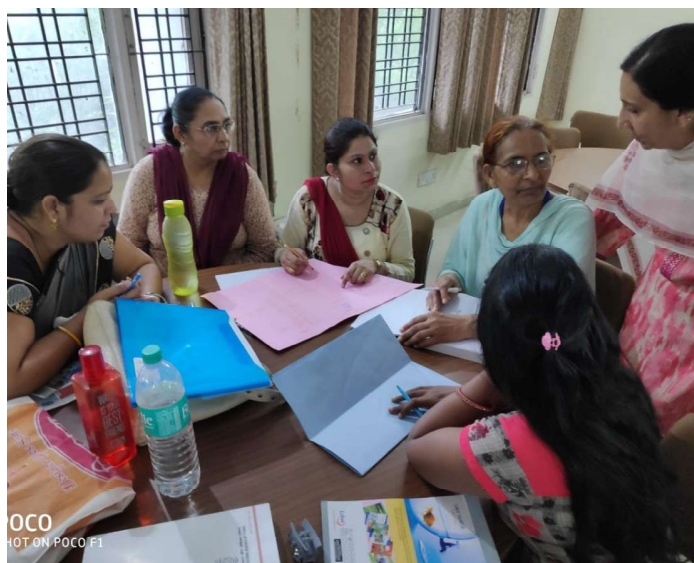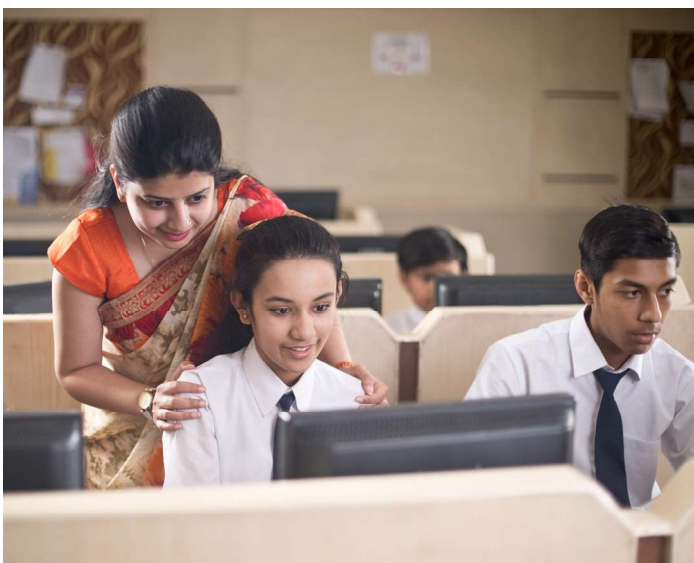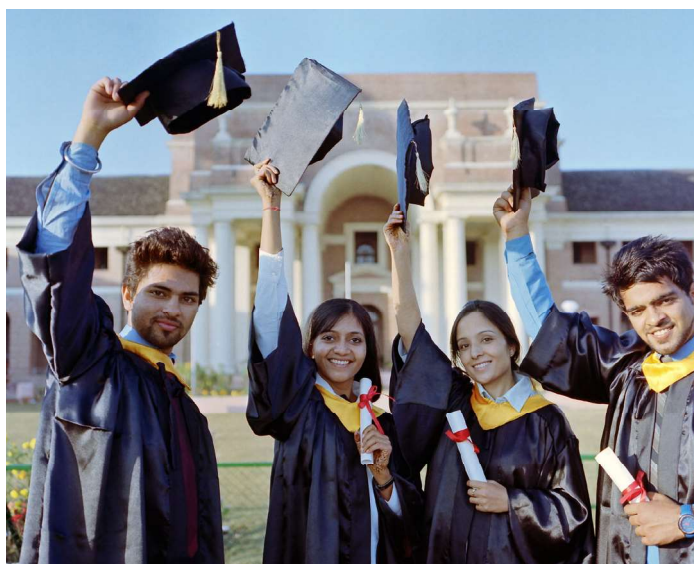
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Survey Partner Hansa Research Group Private Limited

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Acknowledgement

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In the spirit of Centrally Sponsored Schemes in our federal structure, equally important partners in this endeavor have been the State Governments of Assam, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Kerala, Maharashtra, Meghalaya, Odisha, Puducherry, Uttarakhand and Uttar Pradesh, and their Chief Secretaries for providing both ground support and operational independence to our field partners for the primary study. Officials across the State governments have extended their gracious cooperation to the study, for which we are deeply thankful.

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Overview

In August 2019, NITI Aayog commissioned an evaluation of Umbrella Centrally Sponsored Schemes (UCSS) under the Human Resource Development Sector. A part of this evaluation was focused on identifying global and home-grown best practices, case studies, interventions etc. to strengthen the implementation of various schemes under the Human Resource Development Sector.

This document is a by-product of the evaluation and presents a compendium of best practices collected through primary and secondary sources, and provides details on implementation mechanisms and impact of such practices. The document is intended to facilitate knowledge sharing and highlighting high impact and innovative practices which have resulted in positive changes for all stakeholders in education sector, both in India and outside.

Twenty-three practices have been documented, covering areas like innovation, technology, gender mainstreaming, convergence, involvement of civil society organizations etc. These practices have been included based on their key impact and contribution to the wider public policy context, by highlighting lessons learnt which may be useful for scale-up or cross-adoption.

It is highlighted that the practices included in this document are not exhaustive, and it is acknowledged that various high-impact interventions and activities are being undertaken across the country, based on global and local lessons, which may not have been included in this document.

This document is expected to be used by policy makers, scheme managers, and implementers for learning lessons from proven successful implementation of interventions. The document aims to bring in one place the available resource of best practices and promulgate knowledge sharing.

Table of Contents

Part I: Human Resource Development

A. Innovation

1. School Consolidation in Rajasthan for Improvement of Enrolment Density and overall Quality of Education

Summary:

The state of Rajasthan implemented a school consolidation exercise for improving the overall enrolment density, efficiency of operations and overall competitiveness of government schools for elementary schools between 2011-12 and 2017-18. The state also had instances of multiple primary or upper primary schools existing in the same revenue village resulting in poor enrolment density. The total number of government elementary schools was over 77,833 in 2011-12 and 78,870 in 2012-13 during the initiation of the school consolidation initiative. This reduced to 66,753 government elementary schools by 2017-18.

Objectives and Rationale:

The state of Rajasthan experienced a decline in enrolment in elementary government schools from 130 million in FY12 to 119 million in FY15. While the state had over 78,870 government elementary schools, nearly 56 percent (class 1 to 5) were standalone elementary schools and 28 percent were standalone elementary schools (class 1 to 8). As a result, students had to shift schools at grades 5 or 8 to continue consecutive years of education. This affected transition rates and drop-out rates in government schools in grades 5 and 8 at elementary levels. Further, it was also observed that several revenue villages had more than one primary or upper primary schools, resulting in schools with lower enrolment density.

Due to the presence of a large number of small elementary schools, each Block Elementary Education Officer managed nearly 275 schools across 30 to 40 Gram Panchayats. This resulted in challenges in monitoring of the schools by the BEEOs. In addition, government schools had only 0.65 teachers per grade, resulting in multi-grade teaching. Nearly 18 percent of the elementary schools were single teacher schools as of 2012-13, with nearly 32 percent of standalone primary schools being single teacher schools. Apart from teaching resources, other requisite infrastructure such as boundary walls, ramps, electricity, libraries and playgrounds were absent in a significant share of schools. Nearly 43 percent schools did not have library facilities, 62 percent did not have playgrounds and 64 percent did not have electricity. The number of secondary and higher secondary schools was also not commensurate to the number of elementary schools which resulted in lower transition rates from elementary to secondary education. In order to address these key issues, the Government of Rajasthan undertook initiatives such as Adarsh schools, State Initiative for Quality Education (SIQE) as well as consolidation of government schools to improve the overall efficiency and monitoring systems in elementary education

Key Stakeholders:

The key stakeholders involved were as follows:

1. Rajasthan Education Department

2. State Education Directorates: Directorate of Elementary Education and Directorate of Secondary Education

3. Block Education Officers and District Education Officers

Implementation Strategy:

The school consolidation initiative was of three types:

a. Consolidation of elementary schools with other elementary schools

b. Consolidation of elementary schools with secondary schools

c. Consolidation of secondary schools with other secondary schools

The implementation strategy is as described below:

The main criteria ensured during selection of schools was based on instances of low enrolment density of less than 15 to 30, with at least two such primary or upper primary schools existing in the same revenue village

The school consolidation exercise was coupled with the set-up of Adarsh schools (composite secondary and higher secondary government schools offering class 1 to 10/12), such that the primary or upper primary schools could combined be combined into composite schools with secondary and higher secondary grades. The principal of each Adarsh school designated at the Panchayat Elementary Education Officer (PEEO) for managing all the elementary schools within the Gram Panchayat.

The overall implementation process is as described below:

Resource Utilization: The entire school consolidation initiative was undertaken by the Directorate of Elementary Education and Directorate of Secondary Education. The physical and soft infrastructure resources of the closed schools were transferred to the consolidated schools. The teachers from the closed schools were also transferred to the consolidated schools. This helped improve overall resource efficiency
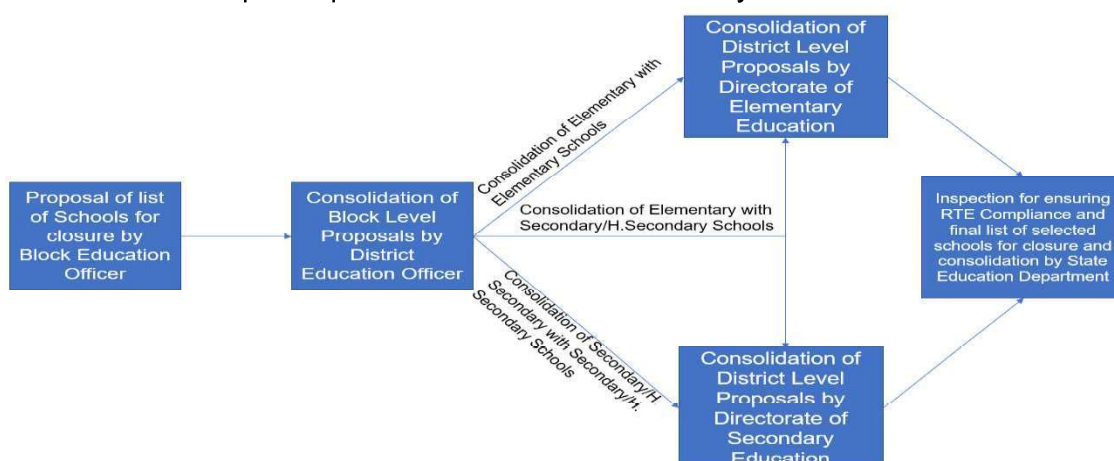
Impact:

As a result of the school consolidation initiative, the total number of elementary government schools reduced from nearly 78,870 in 2012-13 to 66,753 in 2017-18. Coupled with other initiatives such as Adarsh schools (for creation of composite secondary and senior secondary school in each Gram Panchayat) as well as SIQE (State Initiative for Quality

Education), the overall transition rates improved. Transition rate from primary to upper primary improved from 90 percent in 2012-13 to 95 percent in 2017-18. Similarly, transition from upper primary to secondary improved from 90 percent in 2012-13 to 93 percent by 2017-18. In addition, the total number of schools to be managed by the BEEO reduced to 165 by 2017-18 from 275 in 2012-13. Overall, the performance of Rajasthan in NAS 2017 in elementary education was better than majority of states across subjects. The state was also able to increase enrolment in government elementary schools from 59.4 lakhs in 2014-15 to 61.7 lakhs in 2017-18.

Overall, with regards to hard and soft infrastructure, the school consolidation initiative increased the availability of playgrounds, electricity, boundary walls and libraries. The overall number of teachers per school and pupil teacher ratio also improved. Teacher grade ratio improved resulting in a reduction in instances of multi-grade teaching in the consolidated schools.

Key Challenges and Lessons Learnt:

The school consolidation undertaken in Rajasthan involved decision making by block, district and state education functionaries. The perspectives of the school principals and teachers were not analyzed. In addition, it was crucial to ensure that the school consolidation exercise did not result in exclusion of socio-cultural groups due to increase in school distance

Replicability and Sustainability:

The school consolidation exercise was undertaken in two phases in Rajasthan- in 2014-15 and in 2016-17, indicating potential for replicability and sustainability. However, it is crucial to ensure suitable provisions to ensure access such as through transportation facilities. Further, it is critical to ensure that the consolidation does not alienate or reduce participation across all socio-economic groups.

2. Madrasa Modernization Regulation in Uttarakhand

Summary

The state of Uttarakhand has notified a state level regulation to help modernize madrasas by providing them with additional infrastructural and ICT support. The act was created to provide additional financial support to madrasas and develop infrastructure in institutions that have not received benefit under IDMI scheme of central government.

Objectives and rationale

- Modernize Madrasa infrastructure

- Enable access to mainstream education for Muslim children

Key stakeholders

Key Stakeholders	Influence	Role
Government of Uttarakhand	High	Overall supervision and implementation support
Minorities welfare department	High	Planning, Funding, monitoring, execution, and risk assessment
State Madrasa Board	Medium	Implementation and support
Madrasas	Medium	Beneficiaries

Implementation strategy

- An act was created to help augment the infrastructural facilities in madrasas in the state of Uttarakhand

- Madrasas will receive support for development of library, drinking water facilities, toilets, furniture, generator, computers etc.

- Madrasa will also receive support for established of classrooms and other infrastructural support that will help develop classroom environment

Resource utilization

- Madrasa will receive support of up to Rs. 30 lakhs for institutes for development of classroom infrastructure and toilets. The state government will fund the scheme on 75:25 ratio where in 75 per cent will be borne by the state government and 25 per cent by the Madrasa

- Madrasas will receive financial support of Rs. 5 lakhs for establishment of ICT education and modern libraries

Key lessons learnt

The scheme provides a model for a focused approach by a state government towards development of minority educational institutions

The act aims to supplement the efforts of SPEMM in the provision of quality education in beneficiary Madrasas.

Sustainability and replicability

Not enough data

3. Electronic profiling of madrasas in Uttar Pradesh on State Madrasa Portal

Summary

Uttar Pradesh created a state-wide State Madrasa portal for management of Madrasas in the state. The state created an IT enabled portal and integrated details of the Madrasas for improving efficiency in administration and building accountability in management of madrasas.

Objectives and rationale

- Reform Madrasa education system

- Create a standard framework and tool to monitor and manage funds

- Build accountability in the system

Key stakeholders

Key Stakeholders	Influence	Role
Government of UP	High	Overall supervision and implementation support
Minorities welfare department	High	Planning, Funding, monitoring, execution, and risk assessment
State Madrasa Board	Medium	Implementation and support
Madrasas	Medium	Integration with the portal

Implementation strategy

- A state-wide IT portal was created. All the madrasas were onboarded on the portal.

- Details of Madrasas like registration status, land records, key management team members, infrastructural details, teachers, and other staff details were collected

- Aadhar and Bank details of Madrasas were collected

- Basis the details submitted, a background check was conducted and only those madrasas meeting the minimum requirements were profiled on the database.

- This led to a profiling of majority of the madrasas in the state. This also led to ensuring minimum standards for the madrasas. Bogus madrasas which do not meet a minimum standard got filtered out so from fund disbursement

- Details like student attendance, examination, and institution reports are frequently generated. The database is updated annually to update the progress of madrasas registered on the state portal.

Impact

16,852 madrasa details were registered on the portal along with 32,884 teacher details were uploaded on the portal. Those madrasas which are not available on the portal would not be considered for any government benefits in future.

Sustainability

Not enough data

Key lessons learnt

- The portal provides for a model for electronic profiling of madrasas for all the states

- E-profiling has helped in bringing accountability and better administration of madrasas

The portal has helped in better delivery of benefits to the beneficiary institutes

4. Graded Learning Program (GLP) based on Teaching at the Right Level (TaRL) in Uttar Pradesh

Summary:

The Graded Learning Program (GLP) was based on Teaching at the Right Level (TaRL) principles to improve the reading and numeracy skills of children in grades 1-5 (primary classes) in Uttar Pradesh. The program was initiated in a sample of school in August 2018 and was scaled up across all primary schools by January 2019.

Objectives and Rationale:

Children in the grades 1 to 5 were observed to have low levels of reading and numeracy skills. This was found to in turn impede the learning of any additional grade specific prescribed curriculum. The Graded Learning Program (GLP) sought to leverage evidence backed practices to improve the students' basic reading and numeracy levels.

The primary objectives of the program were defined as follows:

a.   Improving the foundational reading and numeracy levels of students in grades 1 to 5

b.   Introducing and ensuring usage of innovative teaching learning practices in schools

c.   Developing support at the block and district levels for monitoring, mentoring and providing academic support

Key Stakeholders:

The program was undertaken by Pratham, through a partnership with the Uttar Pradesh Basic Education Department.

Implementation Strategy:

A 3,500-member ground level team comprising District Resource Persons (DRPs), Block Resource Persons (BRPs) and Assistance Block Resource Coordinators (ABRCs) were trained on implementation of the TaRL methodology by practising it on children for 20 days. The team members in turn trained and mentored the 2.3 lakh teachers to practice it in their respective schools. The program was conducted for every two hours in each school across the grades by grouping the children according to their existing reading and mathematics levels instead of age, syllabus or curriculum levels. The foundational reading and numeracy skills were strengthened by using appropriate activities and material for each group. A mobile based android application was used to upload daily progress by teachers across the schools. Overall progress was tracked basis analytics and dashboarding features using the data collected. The program was undertaken by over 2.3 lakh teachers in over 1.13 lakh government primary schools impacting over 84 lakh children.

Resource Utilization:

Apart from the training, teachers were equipped with locally sourced material and teaching tools. Booklets with simple stories in large font along with practice assignments were provided for children. The additional material was procured at INR 1000 per school.

Impact:

Within 3 months of implementation, over 1.7 million children in grades 4 and 5 were able to read basic grade 1 level Hindi text.

Key Challenges and Lessons Learnt:

Challenges in implementation were faced due to teachers being tasked with additional administrative duties such as invigilation for board exams and election duties. However, the teachers were found to be motivated to implement the program despite these challenges.

Replicability and Sustainability:

The program in Uttar Pradesh was scaled from pilots in 50 to 500 schools to large scale implementation in 1.13 lakh government schools in all 75 districts in the state. Further, the TaRL pedagogical approach has been successfully implemented by J-PAL and Pratham for over 50 million children in India and Africa.
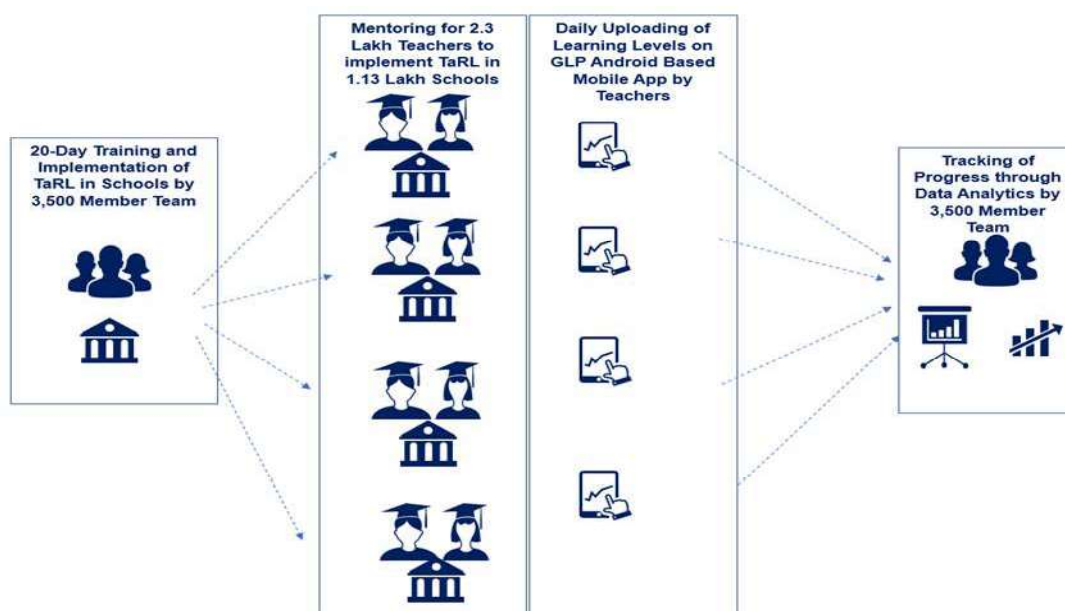
5. Contractual Hiring of retired Government Officials for Administerial Activities in Government Schools

Summary:

In order to enable academic staff to focus on teaching related activities by ensuring that they are not involved in non-teaching activities, the Delhi Government has developed a system to recruit retired government officials on contractual terms.

Objectives and Rationale:

Apart from teaching, the academic staff in government schools are often involved in additional non-teaching administrative activities, which reduces their overall time on task for teaching. In order to address this challenge, the Delhi Government developed an innovative mechanism to leverage the services of retired government officials who are below 65 years of age, who were hired on contractual basis. Through this mechanism, every government school in Delhi was provided with an Estate Manager to undertake the administrative activities on a contractual basis.

Key Stakeholders:

The Education Department, Government of NCT, Delhi is undertaking the recruitment process through online applications.

Implementation Strategy:

The Caretaking Branch of the Directorate of Education, Government of NCT undertakes the recruitment process through an online application system (www.edudel.nic.in). Retired officials who have been employed by central or state governments, local bodies, defence services or equivalent services below the 65 years of age are eligible to apply for the post of 'Ministerial Staff' or 'Estate Manager'. The selection process involves an interview by the school head teacher. They would be staffed on contract basis and will be given a monthly renumeration of INR 25,000 per month without any additional allowances. A maximum of 2 staff for schools with up to 700 enrolment and maximum of 3 staff for schools with enrolment above 700 would be sanctioned.

These staff would be involved in following activities:

•   Estate Manager: Undertaking periodic inspections of the school buildings, reporting to the Head of School, overseeing and ensuring overall maintenance such as civil and electrical repairs, working of CCTV, RO system, etc. liaising with other departments such as PWD, DJB, electric utilities, etc.

•   Ministerial Staff: Ensuring dairy-dispatch, etc., record keeping, file work, handling correspondence, maintenance of cashbooks, service books, etc. opening of bank accounts of students, filing of TDS returns, form-16, etc.

Resource Utilization:

Recruitment is undertaken through existing website (www.edudel.nic.in) with interview being undertaken by the School Head. The staff are paid INR 25,000 per month without any additional allowances.

Impact:

As a result of the initiative, the academic staff (teachers and Principal) can ensure complete engagement in teaching and academic activities.

Replicability and Sustainability:

The initiative is being undertaken in all govt. schools in Delhi.

6. Development Impact Bonds in Rajasthan for Improvement of Learning Outcomes and Mainstreaming of 'Out of School' girls

Summary:

The case study is the first instance of usage of Development Impact Bonds in India for improvement of Learning Outcomes at scale in 166 schools in 140 villages impacting 7,300 girls in Rajasthan during the first phase for the three-year project.

Objectives and Rationale:

Project called for enrolment of 662 'Out of School' Girls as well as an increase in Learning Outcome in Literacy and Numeracy for all children in Grades 3 to 5 during three year period

Key Stakeholders:

The key stakeholders involved were as follows:

1. Primary Investor: UBS Optimus Foundation

2. Service Provider: Educate Girls

3. Independent Evaluator: ID Insights

4. Outcome Payer: Children's Investment Fund Foundation

5. Other Stakeholders: Government of Rajasthan (MoU signed for undertaking initiative) and Instiglio (for Design and performance Management)

Implementation Strategy:

The implementation strategy is as described below
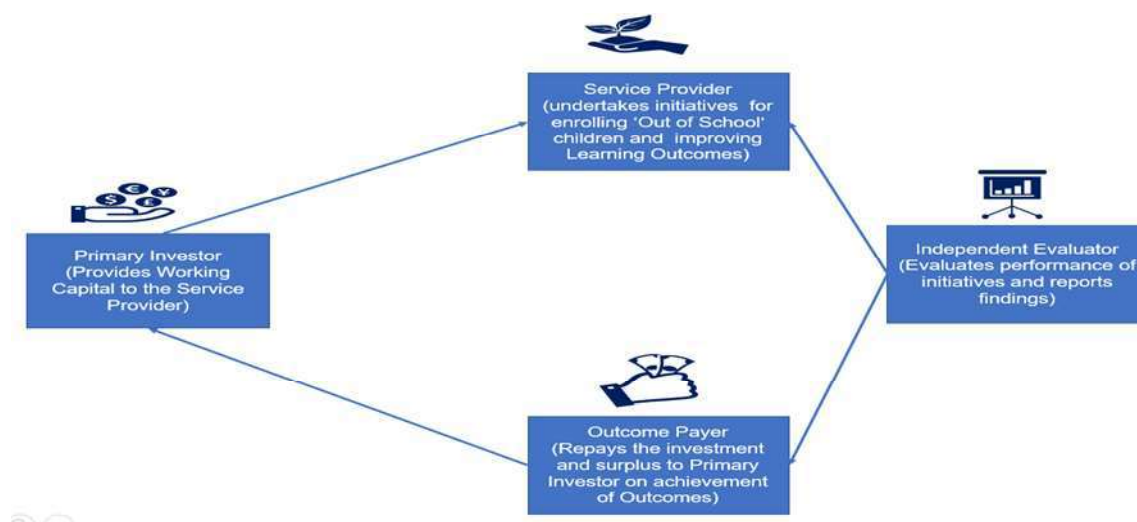
Resource Utilization:

The overall value of the Development Impact Bond was USD 270,000, which was Educate Girls' project budget. The learning outcome measurement was based on ASER test undertaken on the target students during baseline and end line. Village based volunteers undertook door to door surveys to help identify as well as mainstream 'Out of School' girls through community-based initiatives. Activity based remedial teaching with micro level monitoring and interventions to improve the learning outcomes were undertaken.

Impact:

The programme helped mainstream 768 'Out of School' girls against the target of 662. Learning Outcome of target group grew by 79% more than that of children in other schools

Key Challenges and Lessons Learnt:

The greatest challenges encountered were in helping change community misconceptions about the effects of girl child education. The project team also reported instances of absenteeism and dropouts which had to be addressed after the mainstreaming of the girls.

Replicability and Sustainability:

The programme has been scaled up to cover over 13,000 villages in Rajasthan and Madhya Pradesh, reaching more than one million children. Participation of an independent evaluation agency also helped ensure accountability of the programme.

7. Public Private Partnership Policy of Municipal Corporation of Greater Mumbai (MCGM)

Summary:

In order to improve the overall quality of education in Municipal schools for children from economically underprivileged communities, the Municipal Corporation of Greater Mumbai (MCGM) developed a Public Private Partnership Policy. Through the policy, MCGM aimed to leverage partnerships with NGOs, Sansthas, private and philanthropic agencies to improve quality of hard and soft infrastructure as well as teaching quality.

Objectives and Rationale:

The primary objective of designing a policy to channelize participation of the NGOs, Sansthas, private and philanthropic agencies was addressing the gaps in quality of school education imparted in GMMC schools as compared to private unaided schools. The premise that enabling participation of private and philanthropic agencies would serve as a panacea to address deteriorating education quality was based on recommendations of global studies and findings prescribed by World Bank and DFID.

Key Stakeholders:

The key stakeholder involved are as follows:

- Education Department, Municipal Corporation of Greater Mumbai

- NGO, Sansthas, private and philanthropic organizations (individual or consortium of partners)

- Organizations for external Third-Party Evaluation of school performance

Implementation Strategy:

The MCGM policy outlines following four types of partnerships :

Full School Management with Private Partner Teachers (FSMPT)	Full School Support (FSS)	Specific Services Partnership (SSP)	School Input
Area of Partnership • Complete school management of existing or new MCGM school • Teachers and Principal/HM employed by and on payrolls of partner organization	**Area of Partnership** • Complete school management of existing MCGM school • Partner organization to manage, provide teachers, principals, Teaching Learning Material, infrastructure and teacher training • Teachers and Principal/HM employed by and on payrolls of partner organization	**Area of Partnership** Specific Services to be provided by partner organization • Overall school management • Curricular and Co-Curricular Support • Regular and supplemental teachers • Teacher and Principal training • Laboratories-Computer, Science, etc. • Infrastructure-playground, furniture, etc. • Remedial education • Pre-primary education • English speaking training • Vocational education • MIS and community engagement • Student competency assessment	**Area of Partnership:** Provision of specific school inputs: Ex: furniture, computers, books, uniforms, TLM, etc.

The process of selection of the partner organization is as highlighted above.

Resource Utilization:

The efficiency of resource utilization for the Education Department of MCGM was enhanced due to empanelment of partner organizations for undertaking the school quality enhancement activities. A key selection criterion for selection of the partner organizations was

Impact:

The participation of private players in augmenting overall government school education resulted in improved infrastructure with better resource utilization.

Key Challenges and Lessons Learnt:

The primary challenge observed was the inability of the policy initiative to result in improvement of learning outcome attainment. This was highlighted as a key parameter to be considered for future policy design

Replicability and Sustainability:

The design of a structured policy for enabling PPP in government schools was observed to be scalable through collaborations with multiple partners. Partners who participated in the PPP policy initiative included Naandi Foundation, Akanksha Foundation and Rotary Club among others.

8. Green Schools in Gujarat under Sarva Shiksha Abhiyan

Summary and Objective:

The Government of Gujarat initiated the Green and Sustainable Program in 2013 for sustainable development and maintaining the flora, fauna and ecological balances in government schools through active participation of stakeholders such as students, teachers and the community.

Implementation Strategy:

Under this, following are some initiatives undertaken:

• Establishment of Rainwater Harvesting and System for Management of Water

• Cooking using Solar Cooker and usage of Solar Energy

• Plantations of flora

• Waste Management Plan with recycling and reuse

• School Safety Plan and overall School Augmentation Plan

This programme has been synchronized with the curriculum. Under this an audit form has been developed and all schools are scored on aspects such as quality of water, level of recycling, rainwater harvesting, total green area and tree canopy, etc.

The Indian Green Building Council (IGBC) is providing technical support for the program and also rating the schools in these aspects.

Sustainability and Replicability:

This programme is being undertaken under Sarva Shiksha Abhiyan scheme in entire state of Gujarat.

9. Kerala Infrastructure and Technology for Education (KITE) is a Government of Kerala establishment set up to foster, promote and implement modernisation of educational institutions in the state of Kerala

Summary:

KITE was set up by the Government of Kerala to improve the infrastructure capacity in schools, through information and communication technology, capacity building, content development, connectivity, e-Learning, satellite-based education, support and maintenance mechanism, e-Governance and other related activities.

Objectives and Rationale:

The core objective of KITE is to inculcate ICT enabled activities in over 15,000 schools in the State and improve the quality of education via the ICT technology and e-governance mechanisms in the school education department

Key Stakeholders:

Kerala Infrastructure Investment Fund Board (KIIFB) is mandated by the state government to provide the necessary funds for this programme. The mandate for the detailed project reports for all the schools included under Phase I and the higher education departments was given to Kerala Industrial and Technical Consultancy Organisation Ltd. (KITCO). Independent contractors are on-boarded for implementation of the project by KITE.

Implementation Strategy:

The infrastructure division under KITE focusses on modernisation of physical infrastructure to international standards. This is with the aim of improving pedagogy, creating hi-tech classrooms and academic content, and building infrastructure for extracurricular, safety and security. The target of the ICT@schools programme is students, teacher and parents. A holistic approach to the programme has been created by inculcating capacity building of teachers and learners, upgrade of ICT infrastructure at schools, provision of internet connectivity, ICT based content development and tools for collaboration.

Replicability and Sustainability:

The initiative is set to impact About 1.2 lakh teachers and more than 30 lakh students in Kerala. Through this project, the state government has leveraged he capacity of both private and public sector players to achieve scale, in a holistic manner.

10. Government of Uganda introduced a Universal Secondary Education (USE) policy in partnership with the Private sector to boost enrolment at the secondary level

Summary:

In 2008, Uganda's secondary education gross enrolment ratio (GER) was 33. Access to the few secondary schools was limited largely to upper income children in urban areas. The Government of Uganda introduced a Universal Secondary Education (USE) policy to enhance enrolment at the secondary level in February 2007. A fixed per student subsidy was provided to private schools which were contracted.

Objectives and Rationale:

In order to cater to the secondary education needs of the population, the Government of Uganda paid a subsidy for each student enrolled in an eligible private secondary school. Only low-fee private schools that were in areas with limited access to government and/or government aided schools participated in the programme.

Key Stakeholders:

Private schools apply to participate in the USE programme. The Ministry of Education and Sports is responsible for reviewing these applications against the eligibility criteria.

Implementation Strategy:

Students obtaining a minimum score in the primary school leaving examination (PLE) have access to secondary education through this policy. Private secondary schools are paid a subsidy of USh 47,000 (INR 1,200) per student per term under the policy. Parents provide students' uniform, stationery and meals.

The implementation of USE began with S1 (equivalent to Class 7 in India) in 2007, and subsequently one standard per year was added to the programme. All four standards of secondary school were covered under USE by 2010. By 2010, almost **a third of the secondary school enrolment was in private schools** running the USE programme. The capacity of private secondary school at 1,785 is also double that of the 1,008 government secondary schools. The grant disbursement by the government requires submission of the annual work plan and budget by the school's board of governors. Further, the operator is also required to submit progress report cards and work plans for the next term. The disbursement and participation in the programme is subject to very strict norms of financial management to ensure accountability.

Key Challenges and Lessons Learnt:

Strict norms of financial management are followed by the Operator to make reimbursements through systematic, robust and transparent processes. Financial management and auditing arrangements must be robust. The focus is on the quality of student learning outcomes while achieving scale.

Replicability and Sustainability:

The programme has shown an impact on its primary goal of increasing access. The number of schools under USE has almost tripled since its introduction in 2007. The programme started with 363 schools and 42,000 students and by 2013, 879 schools were

implementing the USE programme with 8,06,992 students. One of the most significant benefits of USE has been the increase in enrolment of girls from economically weak families, in secondary schools, who previously would have dropped out due to prevailing gender bias and poverty.

11. Continuous Professional Development using Open Education Resource (OER) of TESS-India

Summary:

Indian teachers and teacher educators in school education system grapples with many challenges, one of which is to gain new thinking, skills and capacities on continuous basis, considering local needs and school needs. TESS-India OER is an initiative that strengthens India's teacher professional development systems and process with key emphasis on enhancing practice-based element of these systems. The resources are available in various formats and 5 different state languages. The OER is adopted by various states and has been successful, since 2015.

Objectives and Rationale:

Professional learning and development is not only critical important but necessary at this moment for Indian Teachers and Teacher Educators. Teachers need opportunities to gain new thinking, skills and capabilities to be more engaged and participative to support classroom practice. The TESS-India OER, that is, 'Teacher Education through School based Support' is an 'Open Education Resource' that offers such relevant support to all Indian elementary and secondary teachers.

TESS-India is a multi-award-winning initiative that aims to strengthen and transform professional development of teachers and teacher educators and school-based classroom practice in India. This programme ensures an innovative, practical and scalable approach to pre- and in-service teacher education. The programme lay great emphasis on inclusive, participatory and child-centered pedagogy, foreseen in India's National Curriculum Framework (2005) and the National Curriculum Framework for Teacher Education (2009).

Key Stakeholders:

The initiative is led by the Open University UK and partnered with Government of India's Ministry of Education. The initiative is supported by the British Council and Save the Children.

Implementation Strategy:

The implementation strategy of TESS-India towards pre and in-service teacher education is based on freely available and adaptable Open Educational Resource (OER). The TESS-India OER consists of teacher development and school leadership units, professionally filmed videos of classroom teaching, concepts and principles of practice. The TESS-India is a toolkit of almost 200 freely available Open Educational Resources (OER) is accessible in multiple formats and five Indian languages – Hindi, Asamese, Bengali, Kannada and Odia as well as English. The OER can be selected, sequenced and integrated flexibly into teacher education programmes and classroom teaching according to priorities and needs of states, districts, schools and individuals. They can be used independently by schoolteachers or their use can be mediated by teacher educators, mentors and peers.

Resource Utilization:

The TESS- India owes to many teachers, teacher educators and education leaders who have engaged with TESS-India in last five years. The TESS-India OER can be accessed

and found at http://www.tess-india.edu.in/. and the videos are available on TESS-India YouTube channel, http://tinyurl.com/tess-india-youtube.

Impact:

The TESS-India OER provide relevant support to teacher educators and teachers with readymade and thematically organized mini-compilations of teaching materials, both in the form text as well as videos. These compilations provide teachers and teacher educators a possible starting point for engaging students and interlining theory concepts to visualized content. This not only encourage teachers and teacher educators to identify key opportunities for professional development in response to local needs but also be progressive and creative in imparting effective classroom teaching.

Replicability and Sustainability:

The programmes have been very successful since its launch in multiple elementary and secondary pre and in-teacher developments in states like Assam, Bihar, Karnataka, Odisha, Madhya Pradesh, Uttar Pradesh and West Bengal.

12.   Pre-service Teacher Education at DIET, Imranabad

Summary:

District Institutes of Education and Training (DIET) is the India's first and significant contributions in elementary teacher education. A case study on DIET in Imranabad district, a backward district of Maharashtra suggests that pre-service education in backward regions is more engaged and responsive to local education needs. The case study also indicates that the initiatives taken by the DIET to start Urdu section, seriousness of principal towards DIET's operation and quality of students confirm the potential of these institutions in rendering pre-service education at regional level and ensuring participation from motivated student teachers.

Objectives and Rationale:

DIETs have not only completed their growth, establishment, and institutional formation but also gained reputation of being 'dysfunctional.' However, the reasons for the same such as state's political will, its action, inaction, and negligence towards systems related to teacher education and hence, quality teachers, have not be researched thoroughly. DIET, Imranabad indicate that pre-service education through DIETs is a preferred option for local students, especially in the backward districts and there is a need to recommit to institutional strengthening of these basic institutions for teacher education, especially considering local context and needs.

Key Stakeholders:

The Principal, student-teacher and teacher educators are key stakeholders in DIET Imranabad looking after/delivery/participating in pre-service teacher education.

Implementation Strategy:

The pre-existing teacher education college in the Imranabad district was upgraded to a DIET in 1995 with four units, including pre-service teacher education Marathi medium. In the same year, DIET began a self-financing Urdu medium section in the same building with teachers employed on contractual basis. The initiative was undertaken by the then Principal considering that the programme was required since larger share of Imranabad population is Muslim and is appropriate looking at local needs.

The DIET offered Marathi and Urdu medium based D.Ed. programme, which was designed as a two-year programme plus six months internship was very popular among student-teachers from Imranabad and other neighbouring districts. The eligibility criteria followed by DIET include computer-based merit list of those who fulfilled the minimum eligibility of 45 per cent marks in class 12th examination or 40 per cent for SC, ST and OBCs, in case of reservation policy. DIET will admit 50 students per course annually, giving DIET Imranabad a total student strength of 200. The fees charged in 2009, for Marathi medium students was INR 2,026 for admission and INR 270 for a term and for Urdu medium students was INR 12,000 per year.

As part of implementation strategy, DIET Imranabad's Principal in-charge in 2009 ensured provision of morning assembly that was attended by all student teachers and DIET faculty. Because of such small initiatives and provision, student's attendance was regular. The

principal also visited Marathi and Urdu medium- for first and second year and took classes himself from time -to time.

Resource Utilization:

The Principal in charge of DIET in 2009 focused efforts on improving pre-service education courses, programme delivery and arranging required resources for delivery of both Marathi and Urdu Programme. DIET innovated the existing D.Ed. programme and introduced additional electives for both year programmes while providing exposure to students for both urban and rural schools. The classroom preparation involved teacher-educator demonstrated lessons, student -teacher involvement in making lesson plans and participation in discussions on teaching skills. Also, there were three preparatory days of school visits, in total ten day to two week's school exposure programmes in primary/ elementary schools in the district.

Impact:

The impact of Pre-service teacher education programme, DIET Imranabad has created positive impacts till 2009-10. The Urdu medium offering made by DIET Imranabad is a unique initiative and was self-financed. This was and continues to be the only Urdu medium teacher education programme in a DIET in the state of Maharashtra. It was an initiative started by the then Principal in 2009 considering local population needs and was successful even on self-finance mode. It was observed that students from neighboring districts would also come to Imranabad to study this programme because DIET Imranabad was not only reputed for success of its student -teachers in Maharashtra's common entrance test (CET), but the student-teachers also formed community to exchange useful tips for completing the two year programme successfully.

Replicability and Sustainability:

DIET, Imranbad as case study was an attempt to showcase the need and significance of DIETs in teacher education eco-system, especially in delivering of pre-service teacher education programmes. Also, DIETs can play a significant role in conceptualizing and contextualizing course curriculum, pedagogy and delivery considering local needs, both from student-teacher perspective and also school perspectives. The case study also indicates that self-finance model adopted for pre-service education is sustainable provided local needs are properly understood, identified and contextualized well both in terms of quality and delivery.

13. Indian Institute of Teacher Education (IITE), Gandhinagar, Gujarat

Summary:

The pre-service teacher education in India grapels with various issues such as determining quality of Teacher Education Institutions and programmes offered, eligibility criteria across various programmes, curriculum of programmes offered, their duration and quality, competency level of student teachers and their certification. In order to overcome the issue of pre-service teacher education programme, the state of Gujarat has tried to support teacher education eco-system at pre-service level by establishing state university that provides courses/ teacher education programmes, affiliated DIETs. And other regional TEIs to provide similar courses/ programmes and conduct research in teacher education space through its research focused, theme -based centres. The institute also participated in NIRF and ensures quality of teacher education courses and programmes.

Objectives and Rationale:

The CTET's pass per centage and NAS survey, 2017 indicate that the quality of teachers attending teacher education programmes and the quality of trainings itself, provided to them are not at par with current education sector requirements. The new draft NEP, 2019 notes that approximately 50 million children at elementary level lacks the necessary foundational skills in terms of numeracy and literacy. The problem is even more grave in case of teachers required at secondary and higher secondary levels for subject specific classes. The centre of the issue are teachers and principals, and this is so because the eco-system for teacher education has not evolved and the context of this is also very limited. The capacity building of teachers, head of schools and educators across TEIs in terms of pre-service education programme is limited and neglected.

One of the ways that the state of Gujarat has tried to nurture the teacher education ecosystem is by setting up **a state public university** solely dedicated to nurturing tomorrow's teachers and affiliating DIETs across state to state public university. The university is called as **Indian Institute of Teacher Education (IITE)** and was established in 2010.

Key Stakeholders:

The key stakeholders involved in the eco-system are:

- State University working as a 'Hub' that offers teacher education courses and provide affiliation to existing DIETs and regional colleges
- DIETs affiliated to state University providing quality D.El.Ed. and B.Ed. courses
- Other affiliated regional colleges – Private and Government offering quality teacher education programmes
- 5 theme and research focused Centers

Implementation Strategy:

IITE aims to be a national university with global significance by offering following courses and research and innovation through its centres:

The institute provides 4-year integrated courses dully recognized and affiliated by NCTE through the university. The intake capacity of undergraduate integrated programme is 100 per course. The general B.Ed. programme is run through DIETs in respective districts.

The master courses – integrated and general is offered at University at intake capacity of 50 students per course. The institute offers Ph.D. and M.Phil. courses as well in cognizance of UGC rules and regulatory standards.

The eligibility standards as defined for each course are as per the rules and norms laid down by the NCTE and standards observed at university levels for meritorious students to take admission across various courses.

The University Governing structure consisting of **Statutory Bodies,** consisting of four bodies -General Council, Executive Council, Academic Council and Research Council and the **University Officers** consisting of Chancellor, Vice Chancellor, Registrar, Director, Centre of Education and Chief Account Officer.

Resource Utilization:

The academic and non-academic staff is a mix of both regular and contractual staff. The institute employs about 61 professional and administrative staff across various ranks. Out of these 30 per cent are regular and the rest are contractual or on ad-hoc basis.

The institute offers various facilities such as library, hostel, amphitheatre, chaupal, innovation centre, Guru Drona Kausalya Vikas Kendra, a dedicated skill centre, project based learning through exposures to different environment, people, content, lifestyle heritage legacy, conservation of environment, being leader, etc., auditorium and mess facility.

Impact:

The institute is one of the model institutes in teacher education space in the state of Gujarat and in country. The institute has used the existing infrastructure at district level – DIETs for its general courses and ensured that student admission and certification undergo a streamlined and regulated process. The institute participates in NIRF ranking, ensuring that quality is maintained.

Replicability and Sustainability:

The IITE model provide evidence of replicability especially in terms of outreach, quality and network and engagement. The institute's approach of affiliating DIETs, and other regional institutions and theme based Centres will ensure (a) Courses/ teacher education programmes that have global outlook and are inter-disciplinary in nature (b) Streamlining benchmarks and closer checks on colleges through affiliation and teacher students through certifications and (c) Closer engagement of DIETs with Higher Education institutions for its faculty such as opportunities like research and innovation in field of education.

The model's sustainability however cannot be ascertained considering financial information about institute is limited. The other states and Union Territories, however, can replicate the same model using their state university's education departments also, instead of having independent university in itself.

14.   State Knowledge Advisory Board in Andhra Pradesh

Summary:

Government of AP launched Knowledge Mission with an aim to transform Andhra Pradesh into an education hub and knowledge society and constituted the State Knowledge Advisory Board (SKAB) with persons of repute and expertise in Higher Education, Industry and Entrepreneurship at national and international level. The SKAB was constituted to advise and mentor the development of higher education in the state

Objectives and rationale:

SKAB is an advisory body that helps in holistic development of higher education in the state.

Key stakeholders:

Key Stakeholders	Influence	Role
Government of AP	High	Overall supervision and implementation support
Higher Education Department	High	Planning, Funding, monitoring, execution, and risk assessment

Implementation strategy:

- SKAB advises the state in development of State Higher Education Plans
- SKAB also helps the higher education department in implementation of academic reforms in the form of choice-based credit system (CBCS), guiding in NAAC assessment, Autonomous status, CPE status, implementing Academic Audit of colleges, Academic Performance Indicator (APIs) to faculty in line with UGC, Curriculum Up gradation etc., to ensure quality in higher education institutes
- The board also advises the department in increase collaborations and industry participation and simultaneously help the state become an Education and Knowledge Hub

Key lessons learned:

- Creation of an expert body of human resources under the aegis of state government to promote higher education in the state
- Improved collaboration between industry and institutes

Sustainability:

The board helps in development of synergy between government, higher education institutes, and industry to create an eco-system for excellence.

15. Economic Empowerment and Functional Adult Literacy Programme

Summary:

In spite of substantial economic growth in recent years, poverty and income inequality continue to persist as significant challenges in Kenya, especially in rural areas where these issues are magnified. Considering the job scarcity in the formal business sector and an overall downward trend of employment in family farming, the non-formal sector is pivotal for creating employment and reducing poverty. In this context, the **Kenya Adult Learners' Association (KALA)** plays an important role in promoting micro-enterprises and advancement in the informal business sector as a means of mitigating youth unemployment and high rural poverty in Kenya. The **Economic Empowerment and Functional Adult Literacy Programme** implemented by KALA in various rural areas of the country aims to impart hands-on training to economically empower adults and youth, equipping them with **Functional Literacy skills coupled with entrepreneurship and management training**. This programme empowers the target adult population, comprising primarily **of rural women and youth**, to undertake income generating activities, thereby generating supplementary income and alleviating the burden of households on seasonal professions such as farming.

Objectives and Rationale:

- Improving lives of women and youth through functional literacy by enhancing enrolment of learners in literacy classes;
- Facilitate entrepreneurship and management training for adult learners and facilitators;
- Facilitate networking and exchange programmes amongst target group members for sharing of experiences, best practices and peer learning;
- Initiate a capital savings grant to women and youth groups/learners;
- Provide learning and teaching materials for the literacy classes; and
- Monitor and supervise literacy classes and small businesses

Key Stakeholders:

The programme is implemented by Kenya Adult Learners' Association (KALA) in Kenya, with institutional support from Directorate of Adult and Continuing Education, Kenya and funding support from Church World Service and Pro Literacy Worldwide.

Implementation Strategy:

The Economic Empowerment and Functional Adult Literacy Programme of KALA consists of four key components:

Empowerment of women and youth groups: Focussed on strengthening the ability of rural women and youth through the application of economic and functional skills to actively pursue income generating activities(non-farming) and self-employment (such as running small businesses) to supplement income generated from harvesting. This process of empowerment is continuous and elevates the social position of women at the community level.

Developing the economic literacy skills of women and youth: Adult learners acquire reading, writing and arithmetic skills through the national adult literacy curriculum

developed by the Kenya Institute of Curriculum Development, with supplementary entrepreneurship and management training integrated by KALA. The adult literacy curriculum also considers the broader needs of women, incorporating dynamic themes impacting women such as human rights, environmental sustainability, civic responsibility, health and reproductive education and economic empowerment.

Supplementary kitchen-garden programme: Focussed on improving women's knowledge of agricultural production and food provision which also serves a domestic importance considering women's role of food providers at the household level. Unlike subsistence farming, which cannot always guarantee adequate food supply or income, the kitchen-garden project can mitigate long term issues of poverty and hunger in rural areas.

Health: KALA's adult literacy programme comprises primary health education, including information on HIV/AIDS control, prevention and care, and childcare for women (especially with respect to vulnerable children like orphan) to empower women to provide children with basic health care services. Participating women visit orphans at their hosts' home in the rural community to periodically monitor their health needs.

KALA's literacy programme addresses some of the country's major problems: educational shortcomings, poverty, unemployment and social marginalization by focusing on vulnerable women and youth in rural areas, who have dropped out of primary education or did not finish secondary education, as main target groups.

KALA's Adult literacy programme is **customized to the learning needs of learners** determined through individual or group assessments wherein each learner is required to complete a basic entrance examination consisting of simple literacy and arithmetic tests that identifies his/her current level of understanding, in English, Kiswahili and other languages. Post the successful completion of the programme, the most successful learners are accredited by the national examination body with an official certificate and can progress to secondary education. KALA facilitates this by nominating a sponsor for the most successful adult learner such that he or she can support/contribute to the programme in future, e.g. as a programme facilitator.

The Adult Literacy Programme is administered through both formal and non-formal modalities, however most of the adult education is informal wherein no strict schedule or curriculum is followed and adult learners determine the class schedule based on their availability with teachers acting more as facilitators rather than instructors. Classes occur minimum twice a week, lasting for 2 hours a day up to a maximum of five days per week and the average course duration is about three years. The course involves peer exchanges and networking opportunities among participants, enabling sharing of experiences and knowledge. Only TLM/textbooks developed by the Kenya Institute of Curriculum Development and other specialized organizations is used which is intended as a means of self-orientation for new participants and not a formal requirement of the course.

The teachers/programme facilitators are part time workers, who receive a monthly remuneration of 3000 Kenyan Schilling (approximately US$ 36) and are specially trained in andragogy by the Directorate of Adult and Continuing Education, in partnership with KALA through a structured training program that last for 3 months. As a mandatory pre-requisite for the training, teachers must possess a certificate of secondary education. Presently, the facilitator/learner ratio is 1 to 40.

The monitoring and evaluation process undertaken by KALA provides learners the opportunity to play an active role in the design and implementation of the literacy programme, and enables KALA to assess the results/outcomes of the programme at mid-

way and at the end of the programme, along with monitoring the literacy levels of learners on a monthly basis through feedback sessions with learners and facilitators.

The impact or effectiveness of the programme on the adult learner's life and on the community as a whole is assessed using a bottom-up approach, which includes, inter alia, performance indicators such as number of adult learners enrolled, the number enrolled who achieved employment, and whether learners feel they have been empowered and involved in decision making process etc. All learners at both the primary and secondary level are mandatorily provided with a formal certificate of achievement once they have successfully completed the course.

Impact:

KALA's Economic Empowerment and Functional Adult Literacy Programme literacy programme reached around **2,500 adult learners annually** and has benefited over **75,000 participants**, especially low-income women and youth in rural communities. The empowerment of women through literacy and income generation activities has offset the marginalization of women in the society by **elevating women's social, economic and political status, and enhancing their engagement and decision-making at household and community level.** This in turn has enabled women to actively pursue and uphold their independent interest/aspirations. Entrepreneurial and self-employment skills have also been instilled among adult learners, who have successfully completed the programme, to supplement household income and micro-enterprises mobilized by learners have been promoted. KALA's interventions have influenced policy makers and administrative stakeholders in the government to put an emphasis on community and gender education, a feat achieved through continuous partnership between the government, the private sector and key development partners. Communities as a whole have also benefited from the community libraries and resource centres set up in support of the project, thus promoting a culture of lifelong learning.

Challenges:

In respect of the high enrolment rates of adult learners, KALA's capacities in terms of funding, material and human resources. Logistical challenges, such as poor road connectivity, and high fuel costs makes it onerous to travel to learning centres for monthly monitoring and evaluation field visits.

Unforeseen weather and climatic changes also hinder the successful implementation of the literacy programme, and especially impacts learners with agricultural businesses. Another challenge is the long distances learners are required to travel to some literacy centres for the classes, deterring their participation. With respect to teachers/programme facilitators, their poor remuneration may lead to motivational constraints, and resource shortages could prevent them from receiving continuous training in adult education and realizing KALA's objectives.

Lessons Learnt:

• Many more adult learners would enrol in the programme due to the commitment of adult learners if the **resources (financial, human, material) were sufficient.**
• Adult illiteracy cannot be combated simply through the three R's approach (Reading, Writing and Arithmetic).**Adding an additional economic aspect to the programme would enhance not only the participation or enrolment rate of adult learners, but also their sustainability throughout the programme and the overall literacy rate of participants, as it provides them with the incentive to 'learn to earn'.** This has positively impacted household relations in rural communities.

- Entrepreneurial training is effective to adult learners as it gives them a **sense of ownership** of the projects they are running and enables them to run their businesses in a profitable manner and better manage their household incomes. It motivates adult learner to participate in decisions regarding the career or business they aspire to build and education they must accordingly strive to receive.
- **Continued motivation and sustainability** of adult learners and facilitators alike can be achieved when they are provided freedom to voice their experiences and ideas uninhibitedly and if they are continuously involved in the design and implementation of the programme.

Replicability and Sustainability:

As is the case with most developing nations, adult education is undeniably an urgent need to counteract illiteracy in Kenya, but the current financial and human resource constraints impede the long-term sustainability and scalability of the programme. However, given the impact of KALA's Economic Empowerment and Functional Adult Literacy Programme programme and commitment of its adult learners, **it can be scaled up across the country if requisite resourcing and financial support is rendered**. Some of the adult learning centres of the programme have achieved a **self -financing model** due to their undertaking in small scale businesses, microenterprises and strong convergence at the community level. Further, increased capacity building/training of sufficient number of teachers/programme facilitators in andragogy science, both in the field and in the classroom, along with some additional motivational incentives will give a further boost to the programme's impact.

B. Technology

1. Application of Technology in Pedagogy: Usage of QR Code enabled Curriculum for Mobile based Teaching

Summary:

In order enable technology embedded teaching systems to improve teaching efficiency and to improve learning experience for students in Government Schools in Maharashtra, Balbharti, the Maharashtra State Bureau of Textbook Production and Curriculum Research developed the innovative e-Balbharti application which can be accessed through a QR code in the textbooks

Objectives and Rationale:

The objective of the initiative was to improve the overall learning experience of students in government schools by supporting technology enabled pedagogy. The e-Balbharti App is a mobile application containing a repository of digital content including e-content, e-textbooks, puzzles, games, etc. that can be used by teachers who have smartphones

Key Stakeholders:

The initiative was implemented by Balbharti, the Maharashtra State Bureau of Textbook Production and Curriculum Research, with the support of government schoolteachers across various districts.

Implementation Strategy: The implementation strategy is as follows:
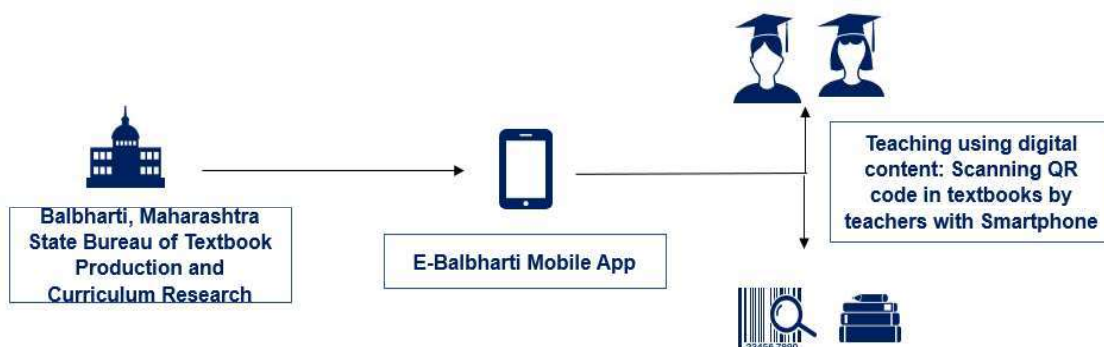
Resource Utilization:

The application was developed in house with minimal financial resource utilization, with primary investment being incurred on the mobile application development.

Impact:

The application witnessed nearly 24,000 downloads within 3 months, at over 150 downloads every day.

Key Challenges and Lessons Learnt:

A critical challenge foreseen was availability of smartphones with teachers. However, the overall initiative experienced widespread acceptance amongst students and teachers

Replicability and Sustainability:

While the initiative was initially introduced for class 8, it was progressively scaled to include classes from 1 to 8.

2. Jnanabhumi portal in Andhra Pradesh

Summary:

AP created a state-wide Jnanabhumi portal for higher education institutes. The portal integrates educational scholarship services and builds synergies for students, institutes, and other stakeholders

Objectives and rationale:

The portal was created to address challenges related to scholarship disbursements to students studying in higher education institutes by creating a single stop solution for all students across the state. The process of application, verification, monitoring, and disbursement was integrated

Key stakeholders:

Key Stakeholders	Influence	Role
Government of AP	High	Overall supervision and implementation support
Multiple departments of the state	High	Planning, Funding, monitoring, execution, and risk assessment
Banks	Medium	Integration of financial system and disbursement of funds
Higher Education institutes	Medium	Integration with the portal
Students	Low	Beneficiaries

Implementation strategy :

- A state-wide IT portal was created. All the higher education institutes were mandated to register on the institutes.

- All the students registering in such institutes were asked to register on the portal

- All departments with scholarship programs for students registered on the portal. Banks were tasked to integrate the student Aadhar bank accounts with the portal

- Scholarship module was made part of admission module. Application process was made simple by minimizing documents. Timely verification of documents was done, and subsequent release of scholarship was initiated.

Resource utilization:

Not enough Data.

Impact :

8,535 colleges were registered on the portal along with 15.80 lakh student beneficiaries. 18 implementing bodies and more than 4000 bank branches were integrated to truly make the system universal.

Key lessons learned:

- Usage of IT solution to build transparency in disbursement of benefits

- Integration of multiple stakeholders on a single platform

Sustainability:

The scheme will further improve synergy by introducing common academic calendars, integrating student and teacher information like attendance, and monitoring of hostels.

3. Mobile Literacy Programme in Afghanistan

Summary: Despite improved economic stability, life expectancy and gender equality and access to education, Afghanistan has one of the lowest literacy rates in the world- **approx. 43.1% for men, and only 12.6% for women-** a consequence of repressive governmental regime and long periods of war. Historically, women have been marginalized in the society and denied the right of access to schools, which has resulted in a **large deficit of literacy and vocational skills**. However, mobile penetration in the country has surged from less than 1% in 2001 to over 18 million active mobile subscriptions in 2012, **with almost 90% of Afghans having access to mobile network services**. This has prompted several organizations to leverage the extensive telecom infrastructure for the design and implementation of various socio-economic interventions focused on marginalized communities such as delivering medical expertise to rural clinics through mobile apps, providing farmers with market intelligence data, and extending financial/credit services. Another prominent example is the **Mobile Literacy Programme in Afghanistan**, which was a one-year pilot project aimed at disseminating literacy skills to communities, targeted at women specifically, through a combination of classroom learning/teaching and mobile technology.

Objectives and Rationale:

- Providing mobile technology to women participants to reinforce classroom engagement and promote the continuous development of literacy skills outside the classroom.
- Empower women living in rural villages of Afghanistan by and by enabling them with mobile/digital literacy and providing them with a means of communication with peers and family.

Key Stakeholders:

The programme was undertaken by the Afghan Institute for Learning (AIL) in collaboration with Creating Hope International. Additional program partners included The US Afghan Women's Council (USAWC) and UNESCO.

Implementation Strategy:

The Mobile Literacy Programme was implemented jointly with the AIL literacy course in two villages at AIL's Learning Centres, which originated in Afghan refugee camps in 2002, and provide various educational courses- from vocational education courses such as sewing, carpet weaving etc. to teacher training and professional development courses. The pilot project **covered 25 women in each the AIL Learning Centres of the two villages, therby covering a total of 50 women**. It was designed to cover the literacy curriculum of AIL **in four months, which otherwise required an average of 9 months to complete.** These centres/villages were selected by AIL based on the **robust community convergence** that is prevalent in each of the villages, which accelerated the implementation of literacy projects, and their close geographical proximity ensured consistent communication between the staff. The mobile literacy learners ranged from **14-32 years old, comprising rural women who had inhabited the area for generations.**

Based on the aid received from AIL, the first Mobile Literacy Learning Centre commenced, offering three classes of literacy, Arabic and sewing. Motivated by the success of the

Learning Centre, another Learning Centre was instituted in a nearby village through financial and training support from the AIL from 2006.

The Mobile Literacy Programme implemented in the two villages was premised on the principle that the classroom-based literacy teaching, which used standardized methods of traditional reading/writing in classes, would be **reinforced through mobile based learning outside the classroom, thus catalysing the pace at which literacy skills were attained and internalized**. To this end, **mobile phones and texting cards were allocated to each of the female learners** and many different kinds of literacy tasks were sent to the learners as mobile messages to reinforce their reading and writing skills. These included tasks such as 'fill in the blank' sentences, wherein learners were asked to rewrite the sentence with the word filled in, thus ensuring that sentences were properly read and practiced and that the missing word was found. Another task was to restructure sentences to ensure grammatical correctness, thereby enhancing the reading comprehension and grammar skills of learners. Additionally, open-ended questions designed to enable critical thinking and writing skills, were also asked. **The students attended their literacy class six days a week for four months and sent an average of 1,750 messages over the course of the programme, by using their mobile phones every day**. The technology was used for **both completion of literacy tasks and communication with peers**, thereby entrenching the practice of literacy skills in daily life and socialisation.

Learners were enthusiastic about harassing mobile technology to supplement their classroom learning and experienced teachers mentored them to bridge their literacy learning in and outside the classroom. The fast-paced progress and positive feedback on their developing literacy skills was very encouraging for the students and they came to perceive literacy as a useful lifelong skill or tool rather than a task that yielded no clear benefit.

The implementation of **pre and post-tests** ensured effective monitoring and evaluation of the implementation of the programme and student progress. The post-test tested the ability of students to devise both short and long answers to specific questions (i.e. Who do you respect and why? / What did you do this morning), as compared to their ability prior to the project. This served as a more practical gauge of the learner's literacy skills rather than seeking exact meaning or spelling or words.

Resources:

The human resources for this project included **two experienced literacy teachers along with a project leader based in the AIL Central Office, as well as a dedicated supervisor for each Learning Centre**. With respect to ICT, all students were given **a mobile phone with enough credit** provided to complete the literacy assignments. The use of established venues and experienced staff was a key success factor of this community led programme.

Impact:

At the end of four months of literacy training, **83% of students** were able to complete the final post- test using correct sentence structure and vocabulary, fulfilling the requirements for progression to literacy level three in accordance with the Afghan government curriculum. Several learners who commenced the course with a non-existent or very basic level of literacy progressed significantly, which also included learners who even managed to attain the ability to read magazines and newspapers. The results of the project demonstrated that

a literacy level that normally takes nine months to achieve **could instead be reached in two months with the integration of mobile phones.**

Students who participated in this programme have requested that it be expanded to all literacy courses and other AIL centres. There are now 83 literacy students waiting for the next batch Literacy Mobile Programme to commence.

Other indicators of programme's success include:

- Rise in the number of girls and their families interested in participating in the programme(as evident from the waiting list of 83 students for the next programme).

- All 50 students sustained the entire duration of the programme.

- Increase in critical thinking skills, as reflected by questions posed to the participants in post and pre-tests.

- Increase in the use of mobile phones for interpersonal communications and practical daily literacy, alongside a diffusion of skills into the girls' families, who also began to use cell phones based on training from their daughter

Challenges:

- Retaining qualified and experienced teachers/ trainers is a major challenge as they do not receive any remuneration, especially in rural areas which suffer from shortfall of committed and qualified trainers. This issue has led to high staff turn-over, which can affect the quality and continuity of the programme.

- Programme's financial sustainability is inadequate as funding support from sponsors, combined with membership fees and the sale of learning materials, is insufficient to meet the programme's annual costs.

- Cultural barriers/Stigma impeding women's use and adoption of ICT and literacy classes.

Lessons Learnt:

- The pre-existing professional expertise and institutional stability of the people working for the Mobile Literacy Programme was a crucial aspect of its success. Given the experience of the teachers, no additional teacher training materials were required, aside from the list of questions to send participants through text messaging.

- A close teacher/mentor-student working relationship and teachers who were committed to AIL's mission allowed these individuals to build strong community and family acceptance of the mobile literacy programme, the value of technology-mediated instruction and learning, and the overall benefits of literacy and education for women and girls.

Replicability and Sustainability:

The results of the Mobile Literacy Programme have indicated great implementation success and potential for further literacy programmes to use this approach. **Given the enthusiasm and commitment of the learners, it can be scaled up** provided adequate **long term technical and financial support is rendered by programme sponsors/partners** to ensure consistent provision of ICT/mobile resources, as well as teacher training and fixed renumeration/salaries for their sustained participation. Concerted outreach efforts and community advocacy campaigns to break down the social stigmas and cultural barriers

attached to illiteracy are equally necessary for the social sustainability of the programme and long-term demand and participation of beneficiaries.

4. Improving Adult Literacy using Information Technology in Lebanon

Summary:

The Department of Electrical and Computer Engineering in American University of Beirut undertook a programme involving the implementation of Computer Aided Learning to impact ICT skills and combat overall illiteracy in Lebanon.

Objectives and Rationale:

While Lebanon is known to have high literacy rates amongst Arab countries, the objective of the programme was to address the prevalent illiteracy amongst adults in the country through the delivery of ICT skills to them. This was because it was considered that overall literacy includes knowledge of basic usage of ICT, in addition to having basic literacy and numeracy skills

Key Stakeholders:

The program was undertaken by American University of Beirut's Department of Electrical and Computer Engineering, who worked in tandem with the different adult literacy programmes being undertaken by the NCL-National Committee for Literacy and Adult Education (Ministry of Social Affairs).

Implementation Strategy:

The programme focused on leveraging computer aided learning and ICT for delivery of the programme to the learners. The programme intended to address the shortage of literacy educators in the system by using ICT for enabling greater coverage. Some of the features included personalized adaptive learning at the learner's individual pace, provision of digital literacy in addition to basic numeracy and literacy.

Resource Utilization:

The programme delivery was through ICT systems, with programme management being undertaken by the American University of Beirut.

Impact:

The project provided an opportunity to the adult beneficiaries to gain ICT skills apart from gaining basic literacy and numeracy. However, a crucial finding was that ICT cannot entirely replace human adult educators and hence, Computer Aided Learning and ICT can be used as an enabler to supplement human pedagogy

Key Challenges and Lessons Learnt:

The programme was well received by the National Committee for Literacy. However, the programme experienced resistance from external stakeholders, including adult literacy educators, who felt that usage of ICT enabled systems could pose a threat to their job security. It was also realized that for greater effectiveness of usage of ICT or Computer Aided Learning for delivery, presence of adult educators and their pedagogical techniques were crucial. This indicated that technology can only be used as an enabler for imparting literacy and not as the sole replacement for human pedagogy

Replicability and Sustainability:

The objective of the programme was to scale the project to other Arab countries. Critical success factors for scalability include availability of funding as well as stakeholder acceptance and consensus.

C. Community Engagement

1. 'Maa' committees in Uttar Pradesh to check mid-day meal quality

Summary:

Maa committees are formed at school level to keep a check and look at all aspects of mid-day meal implementation. The committee undertake responsibility to keep a check on cleanliness in kitchen, preparation of quality and nutritious food and serving of food equally and on time among all students.

Objectives and Rationale:

With increasing number of complaints received about mid-day meal, its quality and implementation in elementary schools, the state has undertaken a more cohesive approach in engaging mothers of students availing MDM at respective schools. The state will now form 'Maa' committees in each school to keep a check on mid-day meal served to students and that nutritious food is prepared in hygienic conditions.

Key Stakeholders:

The key stakeholders are state Programme Management Unit, MDM, U.P., mothers of children studying in school, head of school and school itself.

Implementation Strategy:

The implementation strategy is to form a committee of six mothers, representation from all sections of society, whose children are studying in that school. This committee will then look at all aspects of mid-day meal implementation that is from cleanliness in kitchen to quality and nutritious food being prepared and to food served equally and on time among all students.

Resource Utilization:

The resources utilized in this model are socially acclaimed and acceptable mothers who will represent mothers view in ensuring hygienic, nutritious and same quantity of MDM to all students enrolled in elementary schools.

Impact:

The impact of the model can be already seen, in terms of improved quality and implementation of MDM and more effective and accountable participation from society/ parent's community. This practice will also ensure that the unintended consequence related to scheme are also reduced considering mothers/ maa committees will now own major administrative responsibilities that were initially performed by schoolteachers or head of schools.

Replicability and Sustainability:

The model is implemented in similar formats across various states and union territories such as Assam, Uttar Pradesh, Himachal Pradesh, Uttarakhand etc.

2. Effective Management of NP-MDMS through Bal Sansad in Jharkhand

Summary:

Bal Sansad allows children to be at centre of the issue faced during implementation of NP-MDMS scheme at school level. The model allows children to be prime participant in identifying issues in implementation of scheme at school level, designing solution for key issues, taking consensus from all student representative sand school academic and admin representative and operationalizing the consensus.

Objectives and Rationale:

The NP-MDMS targets all children enrolled at elementary stage in government and government aided, local body schools Alternate and Innovative Education centres under the Education Guarantee Scheme. The scheme covers about 983 Lakhs children across 11.34 Lakhs schools, spread all over the country. However, there are wide disparities that are observed in terms of coverage of scheme across states and Union Territories. Some states are providing MDM till class 12th as well like Tamil Nadu and Andhra Pradesh while some states are still struggling with effective and efficient implementation model for scheme on ground such as Madhya Pradesh, Bihar and Uttar Pradesh. This is mainly due to strong community participation. The government has thus adopted a multi-faceted approach that has mixed results for community participation. Considering the value chain of NP-MDMS, the community participates across the design and planning, implementation of programme, monitoring of programme as well as reporting of the same at state and central level. One of the key interventions adopted by state of Jharkhand is Bal Sansad, a portrayal of Parliament of India. For Bal Sansad, the schools organize two group of children, where one group act as a 'Government', headed by a Prime Minister who is supported by other ministers and the other group act as an 'Opposition.'.

Key Stakeholders:

The school, its students, head of school, schoolteachers and SMCs members participate in Bal Sansad model.

Implementation Strategy:

The Bal Sansad Minister looking after MDM, counts the number of children present and informs Saraswathi Vahini (CCH), monitors the cleanliness of kitchen and serving area and also ensures that every child washes his/her hand before MDM. They ensure that children sit in rows while taking MDM. The unintended consequence of this model is that the children administering MDM for Bal Sansad also helps in distribution of food.

Resource Utilization:

The entire concept of Parliament is translated to children. The Sansad organizes its meeting once a month and evaluate the month's work. During the session, opposition also act as an active contributor by seeking appropriate reasons for work not done. The whole team of students running the Bal Sansad then take required decision in presence of head of school, to solve the issue. This innovative model of collating student's feedback, participation in effective monitoring has not only brought transparency and accountability of school education system but also provided a wonderful leadership development experience among students to solve their school's issues.

Impact:

The impact of Bal Sansad was significant in terms of bringing right kind of issues whether it was related to quality of food material, managing and maintenance of inventory, preparation of MDM, equity and inclusivity within availing MDM etc.

Replicability and Sustainability:

The practice of Bal Sansad is easily replicable and sustainable since it involves students at the heart of solving issues. The concept of Bal Sansad has been picked up in states like Jharkhand and Maharashtra.

3. Identifying at risk students in secondary grades through civil society and community participation to improve graduation rates

Summary:

Diplomas Now helps middle and high schools in America's largest cities ensure that students graduate from school, with a readiness for further education or economic opportunity. It is a fully integrated approach that improves a **school's curriculum and instruction** by identifying students who need assistance and areas of intervention.

Objectives and Rationale:

The programme is based on research by one of the nation's leading dropout experts who found that about half of all eventual dropouts can be identified by the end of sixth grade, and close to 75 percent by the start of high school. Studies found that middle-school students who fail their courses, have poor attendance and poor behaviour seldom graduate. It was also found that half of the students who drop out of school every year come from just 12 percent of the nation's high schools. Diplomas Now identifies those schools and students early and works to eliminate the root causes of dropout.

Key Stakeholders:

Diplomas Now is a partnership of 3 national non-profits- Johns Hopkins University's Talent Development Secondary, City Year, and Communities in School- working to transform the Nation's most challenged middle and high schools in high-poverty areas. Resources and staff from the three partners are brought into schools to- restructure the way classes are organized and taught, identify students who need support, and provide the additional people and training needed.

In 2010, Diplomas Now was awarded a USD 30 million federal grant, Investing in Innovation (i3), to implement and study its intervention model in 32 middle and high schools across the country. Its founding investor is PepsiCo Foundation.

Implementation Strategy:

Diplomas Now identifies schools to partner with the school community so every student has the support of a community of enabling staff and resources, and that the stad is enabled by capacity building and tools to improve student success. Diplomas Now team organizes and supports schools to strengthen achievement and engagement by working with administrators and teachers. **Diplomas Now provides curriculum, teacher coaching and student support. An early warning system identifies struggling students, and the team works to get each student back on track.** Young adults, working full-time in the school, encourage and aid students, enable them to attend school through phone calls if they don't show up, provide tutoring and celebrate positive behaviour. After school, they help with homework and involve students in service and enrichment programs. For the neediest students, Diplomas Now adopts a case-based approach and connects them with community resources, such as counselling, health care, housing, food and clothing. Diplomas Now team tracks attendance, behaviour and course performance – student by student – on a biweekly basis. The programme has seen a marked impact on student

absenteeism, suspensions, learning outcomes in English and Math. It has served 30,000 students between 2010-2017.

Replicability and Sustainability:

A streamlined and guided process for community and civil society partnership can have high yielding results. Mentorship and funds can be provided by state and district level departments initially for rollout, before the programme is made self-sustainable.

D. Convergence

1. 'Setting up Kitchen Gardens in convergence with other schemes/ departments

Summary:

The Nutritious Kitchen Garden can be set up across schools with the help of seed fund provided by MHRD, technical understanding from Department of Horticulture and convergence with other schemes such as MGNREGA for implementation purpose.

Objectives and Rationale:

The central ministry is encouraging states and Union Territories to become self-reliant as well as implement climate resilient practice such as developing kitchen gardens to grow fresh vegetables for the mid-day meal scheme. State like Kerala, Chandigarh, Punjab and Haryana hosted recommendations for setting up of kitchen gardens. State of Nagaland also shared the working details of its pilot, that is setting up of school kitchen gardens with Department of Horticulture. The kitchen garden may supply most of the non-staples' food products like vegetables, legumes, roots, tubers, fruits etc.

Key Stakeholders:

The key stakeholders involved are MHRD, schools, Department of Horticulture and Ministry of Rural Development.

Implementation Strategy:

The central provides seed funds in the form of INR 5000 to schools. The school with the help of this funds, access technical capability of Department of Horticulture and design a Kitchen Garden. The seeds, and manual for growing the same, all technical advice is provided by Department of Horticulture. The school together with the help of Department of Horticulture access help from MGNREGA and create a kitchen garden. The state of Nagaland during primary survey has indicated using similar implementation strategy for developing school kitchen garden and is now planning to replicate it across all government schools.

Resource Utilization:

The resources used across various convergent schemes are: (a) MHRD provides INR 5000 as monetary support pe school for establishing Kitchen Garden (b) technical support can be accessed from Department of Horticulture for setting up Kitchen Garden in schools (c) Payment to workers for developing Kitchen Gardens under MGNREGA scheme.

Impact:

The impact of the initiative of setting up Kitchen Gardens in schools is that they have evolved into Nutrition Kitchen Garden that will help in addressing issues of malnutrition and micronutrient deficiencies. Additionally, the concept of Kitchen Gardens will pose as experimental learning for students. The establishing of Kitchen Garden is also helping other convergent schemes such as MGNREGA in terms of providing employment to locals and Department of Horticulture in terms of mainstreaming need of their mandate and agenda that is promotion of climate resilient green practice.

Replicability and Sustainability:

The concept has been used across various states and Union Territories. The states are now using convergent support from schemes like MGNREGA and Department of Horticulture for additional funds and technical support to establish and maintain the same.