Reform Agenda for Foundational Learning

Study undertaken for Central Square Foundation

by Ignus Pahal

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The study on Reform Agenda for Foundational Learning was undertaken by Ignus Pahal for Central Square Foundation with the primary objective of developing evidence-based policy-asks grounded in the experience of the states and to generate a buy-in of key stakeholders in the ecosystem.

This report presents the outcome of the study. It has the following sections –

1. Background to the study
2. Introduction
3. Key Policy Asks
    1. Background
    2. Emerging Issues
    3. Budget
    4. Recommendations
    5. Case Studies
4. Towards a Renewed National Programme for Foundational Learning

Background to the study

Equitable Access Attained; But Gaps Remain

India has made substantial progress in enrolling out of school children after the enactment of the RTE Act, 2009. With 95% of children in school now, we are witnessing a steady increase in enrolment of children from marginalised groups.

Equity of Access
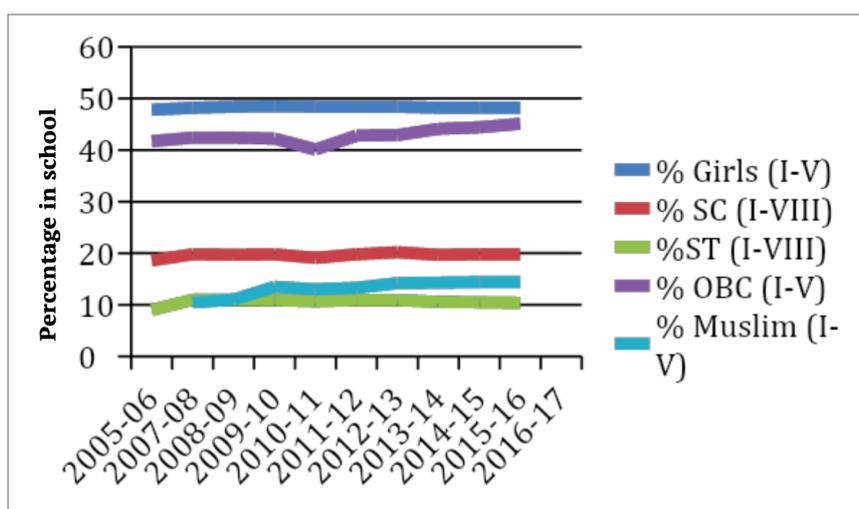
This equitable access has increased diversity in the classroom, as the enrolment of girls, SC, ST, OBC and Muslim children over the last 10 years has grown steadily (as shown in the table above). The gap in expected learning however remains, as year after year, large-scale assessments continue to show low levels of student achievement on basic literacy and numeracy at the primary stage (ASER, 2014).

Children who can read at least Std. 1 level text

Year	Class III All India Average	Class V All India Average
2006	48.1	53.1
2007	49.2	58.9
2008	50.6	56.3
2009	46.6	52.9
2010	45.7	53.7
2011	40.4	48.3
2012	38.8	46.9
2013	40.2	47.0
2014	40.3	48.1

(Source: Trends over Time 2006-2014, ASER 2014)

While it is known that foundational learning is crucial for educational attainment, increase in human capabilities and upliftment from poverty (Psacharopoulos and Patrinos, 2004; UNESCO, 2007), there is a growing recognition that educational access and children's achievement in primary education is correlated with quality of learning (UNESCO, 2011). An analysis of the government investments in school infrastructure, school improvement grants, teachers and pupil incentives for children's tests performance and age-appropriate grade in India showed that higher

investment in children incentives as uniform and books was positively correlated to student test performance and an investment in school and teacher were positively correlated to a higher proportion of 8-11 year-old children having higher literacy and numeracy skills (Cunnigham, S.A. et. al., not dated).

The EFA Global Monitoring Report (2013-14) states that "investing in teachers is the key" for "around 250 million children (who) are not learning basic skills, even though half of them have spent at least four years in school (pg. 5)."

Augmenting Present Efforts Urgently Needed – **Need for the Study**

Critical as is, the government has addressed quality of foundational learning through child-friendly curricula and materials, effective pedagogy, evaluation, in-service teacher training and supportive supervision, through its policies and programmes (SMSA, 2016; SSA, 2014; PBBB, 2014; NCF, 2005). However, *these changes have not lead to improvement in the overall learning outcomes in states.*

Towards this, it is time that it is reviewed, with the insights then being used to inform the course of action ahead. At the same time, the scheme needs to be seen in a wider perspective to establish the salience of foundational learning programme.

This 'Research Study on FLN Reform Agenda' therefore systematically documents some of the key successes and challenges of the policies and programmes in place, national research and practices on the ground. The study envisages a national programme for foundational learning to ensure that learning gaps in the early years (Classes 1-3) are addressed and eliminated in a time-bound manner in India.

There is a dearth of systematic review of documents, budgetary analysis, national research, and consultations with key stakeholders at the national, state, institutional, organisational and individual levels at present. This study addresses this gap to enable the administrative educational leadership at national and state levels (MHRD, SPD), allied academic institutions (NCERT, SCERT, Quality Cell-SSA) and other independent central institutions (NITI Aayog) to plan and implement reforms needed in foundational learning in India.

Study Objectives

Primary Objective

To develop evidence-based policy-asks grounded in the experience of the states and to generate a buy-in of key stakeholders in the ecosystem.

Secondary Objectives

The study will assess,

- The foundational learning programmes (including Padhe Bharat, Badhe Bharat) from a policy and implementation perspective
- Budget and AWP&B analysis from a unit cost perspective based on financial norms and any change needed to support a holistic foundational learning programme

- The interpretation and utilisation of the schemes by the states (key insights from the experience of planning and implementation will be gleaned)

Based on the above, recommendations are made to enable a national fillip to foundational learning in the coming years through a renewed programme. These recommendations will be phased, with phase 1 containing relatively easy to implement changes.

Study: Methods and Modes

The Study includes,

- A systematic review of documents at the national level.
- Semi-structured Interviews with state and national level government functionaries who have been involved in planning and implementation of foundational learning programmes. Interviews with 6 sample states was conducted in-depth. As this is a low-touch engagement rather than in in-depth implementation evaluation, interactions are at the state level rather than district or sub-district levels.
- Semi-structured interviews with practitioners, especially from the Institutions and NGO sector, who have been engaged in supporting foundational learning in India. 11 such interviews were conducted.

(List of documents reviewed, individuals interviewed and state functionaries interviewed are given in Appendix A)

Selecting State Sample

A purposive sample of 6 states is selected considering the following five criteria,

- **Geographical spread:** Covering all geographical regions of the country (north, south, east, west, central and north-east) will provide a better understanding of the contextual problems and successes.
- **Initiative for foundational learning:** States that have made a conscious attempt to implement specific foundational learning programmes: This includes, Odisha (MLE approach), Maharashtra (Pragat Shaikshanik Maharashtra), Tamil Nadu and Gujarat (ABL approach), Himachal Pradesh, Assam and MP (focused programme on foundational learning).
- **Involvement with PBBB:** the following three categories of states emerged in terms of planning and implementation of the PBBB programme –
    - States that introduced an early grade programme/ approach utilizing PBBB funds (such as West Bengal, UP);
    - States that merged PBBB with existing programmes (such as Gujarat, Karnataka, Tamil Nadu);
    - States that did not have a systematic approach to using PBBB funds/ did not apply for PBBB funds (such as Jharkhand, Punjab, Haryana)
- **Special focus on pre-primary education:** Two major categories of states emerge from the consideration of pre-primary education –

- States that have have co-located anganwadi centres in primary schools (Bihar, Karnataka, Rajasthan and Telangana);
- States that have added a pre-primary class in school (Assam, West Bengal, Haryana, Punjab)
- **Performance in NAS, 2017:** This criteria was considered for including stats on the basis of students achievement in national achievement survey. Of these, three States that have done better than national average in Maths (score of 252) and Language (score of 257). These are the states of Tamil Nadu, West Bengal and Gujarat. Three states whose average score in both language and/or maths are lesser than the national average were chosen. These are the states of HP, MP and UP.

Following table shows the States selected and criteria of selection,

State	Geographical Spread	Initiative for Foundational Learning	Involvement with PBBB	Performance in NAS 2017 (higher or lower than National Average)
Assam (AS)	North East	Programme	Reading Enhancement Programme (REP) using PBBB	Lower
Gujarat (GJ)	West	ABL	Merged	Higher
Madhya Pradesh (MP)	Central	Programme	Using PBBB	Lower
Tamil Nadu (TN)	South	ABL	PBBB merged with ABL	Higher
Uttar Pradesh (UP)	North	Graded Learning Programme	Using PBBB	Lower in language, Higher in Maths
West Bengal (WB)	East	EGRaN	Using PBBB	Higher
Himachal Pradesh (HP)	North	Programme	Using PBBB	Lower in language higher in Maths

West Bengal was covered through a telephonic interview; Assam could not be visited because of the flood situation, however, Himachal Pradesh was visited in its stead.

Acknowledgements

Chapter 1: Introduction

Literacy and Numeracy

By the time the child enters school, she understands and speaks in her language, thinks, responds and even modulates her behaviour in terms of the person, place and topic making meaning of what is said. The scaffolding is provided by the social context, during meaningful interactions that create the desire to communicate with others for real life purposes leading to learning (National Reading Panel, 2012).

In this sense, literacy is the *"development of (the) child's language competence: issues related to articulation and literacy, and the ability to use language to create, to think and to communicate with others"* (NCF 2005, p. 67).

And numeracy is, *"The development of mathematical thinking, beginning with learning numeracy and moving towards the enjoyment of and facility with more abstract ideas…supported with concrete experiences and work with manipulations"* (Ibid.) in a meaningful context.

Engaging in meaningful interactions shape the cognitive tools at her disposal and the habits of the mind whereby she puts those skills to use (Lefstein and Snell, 2014, p. 18). Some of these cognitive skills as comparing, contrasting, synthesising, correspondence, problem solving, creativity etc. strengthen learning across the curriculum. These foundational skills are fundamental to developing the child as an autonomous learner for most other learning and for social and economic empowerment (Jalaluddin et. al., 2016; NCF, 2005).

Foundational Literacy and Numeracy

In order to develop the child as an autonomous learner, the elements identified crucial to foundational learning are –
- Focus on learners' active engagement in constructing knowledge
- Supported and sustained with systemic reforms of structures and institutions that are
- Supportive of child's inclusion as well as learning in school (NCF, 2005)

The foundational literacy skills that need to be taught concurrently (and not sequentially) include,
- Oral language and vocabulary development,
- Engagement with print that includes print awareness, connecting with children's literature
- Sounds, symbols and words that includes awareness of phonics and phonemes, knowledge of letters, and recognition of words that assist
- Comprehension and expression including comprehension, fluency and writing (Jalaluddin et. al., 2016; Jhingran D., not dated)

And foundational numeracy skills include,

- Number and number relations
- Number operations
- Shapes and spatial understanding
- Measurement
- Patterns
- Data handling (NCERT, 2016; Jhingran D., not dated)

Foundational Learning in India

The imperative for foundational learning in India developed along with the global thrust on improving primary education. Improvement in primary education was set as one of the Millennium Development Goals in 2000. While the large scale programmes implemented in India after the 1986 NEP (Lok Jumbish, UP-BEP (Uttar-Pradesh-Basic Education Project), APPEP (Andhra Pradesh Primary Education project), BEP and other efforts of UNICEF such as SPEED) focused on learning in the early grades, within DPEP (District Primary Education Programme) and SSA too there were a number of specific projects (such as CLIP (Chandina Learning Improvement Project) and CLAP in several states, or the Latur project in Maharashtra) for the purpose. It was during this time that a budget head was created under Learning Enhancement Programme (LEP), to enable states to make headway in the early grades. Despite these efforts, it cannot be said that a universal improvement in foundational learning took place, as various surveys (National Achievement Surveys conducted by NCERT; ASER by Pratham Education; other assessments done as part of various state-level interventions) continue to paint a jumbled picture of the situation on the ground. Some regions that appear to perform better in one survey, do not do so in another.

This was followed by a strategy for improving reading skills at the primary level and focus on education and early learning outcomes specifically as MDG and later as SDG 4 by UNESCO (2014 and 2015). India was grappling with issues of access and retention in schools when large scale household based literacy and numeracy assessments conducted in rural districts pointed to low learning levels at the primary stage (ASER, 2005). Keeping foundational literacy as a focus, NCERT conducted an early literacy pilot study in 5 districts in Mathura based on the whole language approach. The objective of this intervention was to address the area of early literacy as a special focus and to build capacities of teachers so children learn to read for meaning and write with purpose (NCERT, 2014). Later, MHRD issued guidelines to states under the SSA Framework to develop learning improvement programme with specific focus on primary classes (MHRD, 2014). In 2014, these expectations were articulated as broad guidelines for foundational literacy and numeracy in a scheme under the SSA called *Padhe Bharat Badhe Bharat (PBBB)*. States utilised the funds available under the Learning Enhancement Programme head and sought technical support from non-governmental organisations to implement these programmes. States like Assam (Early Reading Programme), West Bengal (EGRaN), Chhattisgarh, Rajasthan, Uttarakhand, Odisha and Uttar Pradesh initiated programmes for improving literacy in classes 1 and 2. A few states like Punjab and Meghalaya implemented programmes to improve foundational mathematics.

Chapter 2: Current Status

In this chapter we outline the major efforts related to Foundational Learning that have been under implementation in recent years, their present status, and highlight the key concerns and issues that have been encountered. The related budgetary considerations are also provided.

From RTE to Samagra Shiksha

Mathura Project – 2007 - 2012

NCERT's Mathura Project in early literacy was one of the primary sources for the shift in emphasis of the Central government towards early learning. The project was informed by a certain school of thought (whole language approach) of how children develop language. At the time the focus remained primarily on early grade literacy (EGR) with mathematics not being included. The project involved the development of teaching and training materials with thorough testing. A number of research papers emerged from this work along with a handbook on early literacy, training materials and the ubiquitous Barkha Series – a set of graded textbooks for Classes I and II (MHRD, 2013).

MHRD realised that the states needed to be persuaded to emphasise early literacy and numeracy. To this effect, funding was released to the NCERT to conduct workshops at the Regional Institutes of Education (RIEs) where SCERT and DIET faculty would be trained. NCERT also helped set up Reading Cells in many states by collaborating with the SCERTs.

Efforts by MHRD – 2013-2014

The SSA through the PAB sent a notification to the states that their upcoming AWP&Bs should clearly demarcate what they intend to do in Classes I-II, III-V and VI-VIII. At the same time in 2014, NAS Cycle 3 results were released. This report looked at the learning levels of Class III students in the country covering over 1 lakh students across 298 districts in 34 states and UTs. The results were not entirely promising with children being able to answer only 64% of language and 66% of mathematics questions correctly. This led to the states actually planning with a focus on early primary grades. Prior to this the focus was on primary (I-V) and upper primary (VI-VIII) as whole cohorts.

Much enthusiasm was generated around this time with states adopting the Barkha Series and other foundational learning materials. NAS report cards were used as a discussion point during PAB meetings. A national level guidance note with principles of early language (such as dedicated teachers, the importance of oral and home language, use of libraries etc.) was created (SSA, 2014).

Padhe Bharat Badhe Bharat – 2014-to date

This aforementioned guidance evolved into the Padhe Bharat Badhe Bharat (PBBB) guideline with an added component of early mathematics (as NCERT had already developed some materials on this). A nationwide sub-programme to the SSA, PBBB was planned in a twin track approach –
1. To improve language development by creating an enduring interest in reading and writing with comprehension; and,
2. To create a natural and positive interest in mathematics related to the physical and social world.

Following 2014, the message from the PAB to states was to plan specific interventions for classes I-II and III-V in their AWP&B. The states performance on Class III NAS was a discussion point during the PAB meetings. Though the states responded by acting on this imperative, the approach taken by them tended to be piecemeal rather than holistic in terms of the organic linkages between the different activities, projects and programmes being implemented as is evident in the interviews from state officials (given in the next section under Incentivising States/Focus on FLN). Where an external agency worked with them (such as Unicef in EGRaN in West Bengal), there was a relatively more organized and interlined effort.

Key Areas for Policy Asks

Though there are a number of different facets to foundational learning, the following key areas were considered to be significant in discussion with the stakeholders –
1. Learning Expectations/Standards
2. Teaching Learning Materials
3. Teacher Trainings
4. Teacher Support and Mentoring
5. Instruction Time
6. Teacher Resourcing and Deployment
7. Periodic Assessments
8. Key-stage Exam
9. School Readiness/Pre-primary
10. Incentivising states

In the following sections we present the current status of Foundational Learning as seen through these sub-heads, ascertained from documents and interactions with national and state level stakeholders, along with key issues and gaps to have emerged.

Learning Expectations/Standards

Background

Learning outcomes have been defined by a number of states in the past (UP, HP, GJ). These LOs were utilised by the states to align their academic interventions with a common vision. In 2016, NCERT created a national-level document on learning outcomes for grades I to VIII. (NCERT, 2016). This document consists of not just the objectives but also suggested pedagogical processes to achieve those LOs. After the NCERT LOs were published, many states across the country, in consultation with NCERT, refined, adapted and published their own version of the LO document (SCERT UP, 2018). In many cases, the states report (HP, UP, GJ) that the NCERT LOs are akin to their own. Some states follow the NCERT learning outcomes as they are with no modification, often citing the usage of NCERT textbooks as a reason (HP), while others continue to use their own learning outcomes (GJ, UP), or modified versions of NCERT LOs (AS, CG).

The larger trend appears to be that of accepting NCERT LOs, especially in states that have adopted the textbooks developed by NCERT (12 states and UTs including HP, Delhi, Haryana, Uttarakhand, Goa) (The Economic Times, 2008). The centralised textbook development process however, should be critically evaluated to determine if it adequately addresses the existing diversity within the state/UT.

A study of the LOs indicates that they are, based on the principles and stages arising from child development as well as pedagogy research (as seen in the NCF Position Papers or in contemporary research conducted by various agencies). For example, in language, the contemporary views that *"conceptions of literacy need to be seen as building upon oral language skills of learners rather than just as a process of encoding and decoding of the script"* and that *"these (LSRW) skills need to be taught concurrently and not sequentially"*[2] appear to be largely followed in the flow of NCERT Learning Outcomes as well. This can be illustrated by looking at the learning objective for language in class 1 which states that *"the child can, in her own language and/or school language to talk for various objectives like, poems, story telling, asking questions for seeking information, sharing personal experiences"*, children can *"talk, give opinions and ask questions on the heard text [story, poem, etc.]."* (NCERT, 2016, p. 6).

Though LOs are often displayed in schools as posters on the walls, they do not necessarily impact the pedagogical practices as expected. *States have expressed that teachers face difficulties in understanding LOs and converting them into actionables*. Field experience and conversations with practitioners show that teachers and supervisors find it easier to verbalise the content and expectations of the learning outcomes but find converting the idea into practice difficult. Thus it appears that there are obstacles in understanding both *how* to attain the LOs through classroom processes (and what needs to be prioritised) and knowing *what* they are.

Issues/Needs

Considering the area of learning objectives from two fronts – that of the teacher and the learner, the following two areas of concern emerge from the interviews with experts and states –

- Lack of focus on higher order LOs and a disproportionately large amount of time spent on achieving mastery of lower order LOs. This likely finds its roots in their inability to align their classroom activities with the objective. Thus, they resort to lower order LOs such as "हिंदी के वर्णमाला के अक्षरों की आकृति और ध्वनि को पहचानते हैं" as they are easier to understand and fit easily with traditional pedagogical methods. These teaching methods that do not take into account children's contexts and needs tend to lead to lower learning levels. On the other hand, since higher order LOs subsume basic skills and competencies, a focus on them would tend to improve learner performance as they are generally more cognitively engaging and interesting for the learners. This increases their engagement time instead of letting them sit passively and thus earning poor returns on their time invested in school. For example, focusing on higher order oral skills enables children to use a large number of words in a short space of time, leading to strengthening of language structures, the development of an oral vocabulary, exposure to the different contexts and uses of language (pragmatics), providing a rich basis for the development of literacy.
- At present the LOs of Language and Mathematics (grades 1-2) and Language, Mathematics and EVS (grade 3) are articulated separately, ignoring the natural linkages across them and also increasing the overall list of LOs to be covered. There is a need to see them together in an integrated manner, and matching them with the abilities of children coming from a variety of backgrounds and several different spoken languages at home.

Recommendations

1. It is recommended that a national consultative workshop/s be conducted involving the NCERT, experts and state representatives to support the states with the following aims:
   - Certain essential LOs be agreed upon between the NCERT and the states

o The states be provided with a guideline to develop additional context-specific LOs if needed, and

o The states build on earlier work done to prioritise a limited number of LOs looking at scholastic and socio-emotional aspects.

These should then inform the FLN work done in the states.

Additionally, as elaborated later in the next chapter, there is a need to make the LOs more comprehensible and operational by:

- Identifying a limited number of nested, higher order LOs (e.g. including both accuracy and fluency in reading)
- Communicating these to teachers along with the actions needed to generate these
- Indexing the materials available and in use to the LOs so that teachers are able to utilise them appropriately
- Using the assessment processes to convey the salience of the critical LOs so that they get emphasized at the school as well as the state level

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Case Study

Organisation for Early Literacy Promotion (OELP) locates its work within a Balanced Approach with an emphasis on both meaningful engagement with language and literacy in natural ways and a structured programme that focuses on developing strong foundations. It is based on the premise that children need meaningful, and socially relevant engagement with books, along with various opportunities to actively and purposefully engage with a variety of print based reading and writing activities. The framework acknowledges the need for tapping the rich resources of spoken language and real world experiences that the children bring into the classroom.

In its intervention with six Municipal Schools in Delhi in classes 1, 2 and 3, the organisation realized that the young readers and writers who engage with script mechanically do not make sense of reading and writing. The Bada Khadi had too much information for the children to process so it was becoming a tool with which they engaged in very mechanical ways. This led them to break down the Bada Khadi into smaller groupings named varna samoohas. Each varna samooha consists of sets containing a limited number of apha-syllables, vowels and abbreviated vowel markers for matras. This was done to combine the phonological and orthographic processes such that the children understand the sound-symbol relationships as part of meaningful spoken and written language in a familiar context. These evolved over an academic year through an organic process of intensive and sustained engagement in early grade classrooms in dialogue with the teachers.

Using this balanced approach, the children are expected to,

- Understand sound-symbol relationships as part of meaningful spoken and written language in a familiar context.
- Engage with the script in a variety of ways- orally, through drawings and by recitation.

References

- Jayaram, K. (2018). Implementation Framework and Pedagogic Processes for a Foundation Programme in Early Literacy and Learning with a focus on classroom practice. Retrieved from
- Keerti Jayaram OELP's Approach to Building Script Knowledge in Beginning Readers and Writers (Varna Samooha Vidhi) OELP, July 2018 Retrieved from : http://eli.tiss.edu/category/decoding-the-script/page/5/

Case Study

The Language Learning Foundation's (LLF) approach to the teaching of language and literacy has two dimensions:

1. Balancing both 'lower-order' skills-oriented work (phonological awareness, decoding, writing letters and words correctly) and higher-order, meaning-based (oral language development including listening comprehension, conversation, reading, engaging with books, drawing and original writing) work. Here, teaching of decoding should be explicit and systematic.

2. Oral language development, decoding related work, reading and writing activities should happen on a daily basis (Jhingran D., not dated, p. 30).

Case Study

The PSS approach to early literacy developed by Dr Maxine Bernstein emphasises the systematic teaching of letter- sound correspondences in Marathi in a way that it remains meaningful for children. The phonics instruction in this methodology takes advantage of the transparent nature of the Devanagari script, in which the sounds and symbols map onto each other in a regular and transparent manner. Along with decoding, this methodology emphasises meaning-making by bringing children's experiences into the classroom in oral and written forms, creating contextual content, immersing the children in a print- rich environment and introducing them to a wide range of children's literature. Using the approach, the children are expected to,

- Learn sound-character correspondences (decoding) through systematic teaching
- Narrate experiences that are written down to help them read the account (organic reading/language experience approach)
- Read additional material- stories, poems, etc. (Bernsten, 2009)

Teaching Learning Materials (TLM)

Background

The need for TLM has been recognized from Operation Blackboard (1987) onwards, with DPEP and SSA also laying considerable stress on the availability and use of TLM, especially in the early grades. A substantial amount of budgetary allocation has also been made for the purpose at different times (details provided ahead). Experts interviewed by us, too, agree that at the foundational stage hands-on experience with materials is critical for the psycho-cognitive development of the learner, in particular items that are larger in print and physical size such as big books, blocks and toys. TLM kits containing concrete materials such as beads, flash cards, blocks, marbles, picture charts etc. have been provided to schools by states under the TLM budget head of SSA.

The continued supply of TLM over the last two decades has resulted in a diversity of situations at the state level. States such as Gujarat and Himachal Pradesh feel that their schools are well stocked with materials and thus do not wish to provide more. The focus now is instead on ensuring the use of what is already available. Other states like Madhya Pradesh assert that they have not provided enough TLM in the past and would thus now like to focus on provisioning of materials. Even in the former case rather than a complete ban on provisioning TLM, a reduced supply is being pursued (e.g. Gujarat is not providing a kit but does supply workbooks). Additionally, some states like Odisha and Jharkhand have run

multilingual education (MLE) programmes for early years and have developed specific materials, at the state level, for the purpose.

Special budget heads have existed for procurement and development of TLM with a teacher grant of Rs. 500/- being one of the most talked about. This annual grant at the primary and upper primary stage was set up under the SSA. However, this grant has been discontinued under Samagra Shiksha. Instead a TLM grant of up to Rs. 10,000/- has been made for BRCs and CRCs. Along with this, a library grant of Rs. 5000/- for primary and Rs. 13000/- for elementary schools has been approved in the PAB 2019-20.

The Samagra Shiksha Guidelines stipulate that *"All the procurement of books from library grant should be done at State and UT level. The funds meant for library grant should not be released by the States and UTs to Districts/schools."* It also suggests that states procure the graded reading series developed by NCERT, and if need be, translate it into regional languages. This has been a cause of concern for experts as translation often does not lend itself to 'grading' in other languages. It also tends to leave the marginalised communities wanting as such centrally prepared texts may not reflect their cultural or linguistic context. While a transcreation process is likely to work better, states have often been averse to this as it is not cost-efficient.

States have also been restricted to procuring library books from central publishers like NBT, CBT or CIIL only. Or from the literature produced by the State's SCERT itself. This limits them to procuring from an insufficient corpus of literature which may leave no room for meeting contextual needs.

Issues/Needs
Some of the concerns regarding TLM remain:
- Lack of availability in some states (e.g. MP) along with sufficient or more than needed availability in others (e.g. MH, HP).
- The general concern voiced by experts has been regarding the use of TLM. Teachers tend to fall back to the traditional didactic mode of 'chalk and talk' instead of making use of materials, perhaps because they are unable to link the materials with specific objectives (LOs). This leads to a situation where mandatory materials (primarily the textbook) become the only source of learning and the TLM lie unused.
- The discussion preceding and following a reading exercise is often amiss. This makes reading more of a decoding exercise rather than that of comprehension supported by meaningful interactions.
- Centrally developed reading materials are often unable to generate engagement as the context does not always get retained in translation. Even with the children in a linguistically similar situation, the material might not address local contexts.
- As material is provided in a 'fully-formed' state, teachers lack ownership when it comes to using it. If instead teachers are encouraged to develop and adapt material, they are more likely to make use of it in keeping with children's cultural and cognitive needs.
- Multilingual contexts (e.g. in tribal areas or urban slums where children of different language backgrounds study together) may not be addressed.
- There remains a strong need for access to a wide variety of child-friendly and early reader friendly books and magazines. This gap is not addressed sufficiently at present, and is made worse by the restrictions placed on book procurement as mentioned in the background.

- In our visits to the states (MH, TN, HP), we saw that the TLM sets often lay unused. While reasons for this have been identified above, this fact in itself points that providing more TLM does not add value by itself.
- For the teacher, the effort that goes into using the TLM (distributing it, using it, collecting it) is a cost that does not justify against the learning it generates in students. Since TLM is an inventory item that is routinely accounted for, it creates a disincentive for the teacher from making use of the TLM in the regular teaching-learning process.

Recommendations

- As pointed out by several experts, fewer 'finished' materials and a greater proportion of 'raw' material that is multi-use and adaptable should be provided. For example, picture decks, plasticine, and letter cards can be used for multiple outcomes. Similarly, stationery items (charts, coloured paper, sketch pens) can be used by the teachers to create their own materials. Thus, only a limited set of TLM needs to be added to existing corpus in schools.
- To enable this to happen, a Guideline may be prepared on the characteristics of the materials (and the combination required) in different contexts - i.e. the kind of material be indicated rather than recommending any specific material. This may be issued by the MHRD with support of TSG.
- States should organise district and sub-district level activities for teachers to generate locally relevant, contextual materials. (DIETs could take lead on this with assistance from SCERT). If required, teachers could be trained for the purpose.
- School follow-up processes may encourage and expand the scope of usage of existing TLM as done in the case of HP in the current academic year.

Case Study

In 2010-2013, Ignus Pahal worked in various tribal regions of Odisha where the regional languages were Kui, Juanga, Saora and Munda, instead of Odiya. They wanted to create preschool curriculum literacy appropriate for them. In order to understand cultural context, the team spent several weeks living in the village. They used diverse modes to interact with the community like hosting a dinner for the community and talking after that, observing children. While making the curriculum a large number of community people were invited. They were showed photos and videos of their children to share what their children could and couldn't do. For instance, of physical, social, cognitive development, the children performed well in physical and social domains. Their language and cognitive domains were lacking. This was a significant finding as it meant altering the learning day and reallocating time differently. It meant spending more time on language- creating ways for them to do active listening while retaining the use of home language. This required the community to be a co-creator in the curriculum development process. The second significant dimension to this curriculum development was to source their folklore for their curriculum/material. It was found that due to religious conversions in the community, the folklore in original language was lost. It was the elders of the community (above 50 years) who retained this cultural knowledge. These community members were identified and a number of them were taught to write for children followed by making a collection of 160 stories, songs and poems over the next 8-9 months. Out of this, 40 books were created and published by Pratham books under the Adi Kahani series. These were the first ever books in the language for these children

Source: Subir Shukla, Ignus Pahal

Case Study

Organisation for Early Literacy Promotion (OELP) presents akshara sets to children, one group at a time. These sets consist of akshara charts, flash cards, word walls, and poem posters. It is important to note that unlike the phonics approach these are all presented simultaneously so that children begin to view aksharas as sound units that combine to make meaningful words. Unlike the sight word or whole word approach, OELP does not provide children with predetermined word lists. This distinction is important as it highlights the active cognitive and linguistic processes used by the child to construct written words.

Case Study

Language and Learning Foundation has developed a cohort of materials that it uses in its programmes across the country. These are listed below.

Oral language development and print awareness
- Materials for imaginative play – doctor set, kitchen set, dolls, gardening tools (Preschool)
- Pattern cards, seriation cards, bingo cards (Preschool)
- Puppets, masks and props for drama and role play (made at school)
- Picture Conversation charts
- Selected picture cards for vocabulary learning and conversation
- Picture story cards (a set of pictures depicting a story in sequence)
- Posters of children's poems
- Big books of stories with simple texts (Home language and school language)

Decoding and word reading practice:
- Varna and akshara cards for whole class activities (big size)
- Varna and Akshara cards for children (small size)
- Akshara grids for blending activities and word formation
- Dice and board games
- Workbooks for writing practice during learning of decoding
- Reading cards with decodable text

Reading practice:
- Graded reading cards
- Children's story books: A set of simple and interesting illustrated storybooks (at least 50-100 books for each class from pre-primary to class 3) for different levels of reading abilities

Other materials:
- Drawing and writing paper
- Crayons and colours
- Stationery items like pencils, rubbers, stapler, scissors, glue, chart paper, marker pens

Material for Teachers:
- A book of rhymes/action songs for teacher reference

> - Activity guidebook for activities for oral language, phonological awareness, vocabulary, decoding etc.
> - Teacher handbook
>
> **Source:** Jhingran, D., not dated, 2016

Teacher Training

Background

In the present academic year (2019-20), *Parivartan* - Integrated Teacher Training Programme (Elementary level), is going to be carried out by NCERT using *"a standardised comprehensive training package ... in order to ensure effectiveness of school eco-system and improvement in learning outcomes."* At present there exists a wide segmentation of trainings with different components catering to the needs of teachers, head teachers, and trainers. This centralised approach is supposed to tie them up in a holistic package.

Parivartan will be conducted in the months of June-November 2019 to directly train all 41 lakh teachers, school heads, BRCs and CRCs at the elementary level. Until July 2019 however, states have not received any input from the NCERT on this training other than the training guides developed for the same. The structure of the programme is as follows[3] –
- NCERT will formulate 8 National Resource Groups (NRGs) having 15 Resource Persons each, including experts from NIEPA. NRG from NCERT and NIEPA will include experts in different subject areas and generic issues.
- NRGs will conduct face-to-face training for the Key Resource Persons (KRPs) identified at the State and UT level, which shall include faculty members of DIETs, SCERTs, IASEs, CTEs, Senior Secondary Schools, BRCs, etc.
- Key Resource Persons will form a group called State Resource Group (SRGs), which will have 6 Resource Persons (5 KRPs + 1 School head trained under School leadership Programme of NIEPA). These SRGs will directly conduct training for teachers, Head Teachers/Headmasters, BRCCs and CRCCs at block level. One SRG will train about 125-150 participants at a time.

A Learning Management System (LMS) Portal and a Mobile App will be developed by NCERT for registration of Resource Persons and Teachers, dissemination of resources, training gap analysis, monitoring, mentoring and measuring the progress online. Previously, some work on this has been done by Karnataka by the way of a programme called *Guru Chethana* under which a Teacher Training Management System (TTMS) was built. This system allows teachers to register their needs and trainers to select and issue orders for trainings. The same system also handles teacher deployment by digitising issuing of transfer orders. This TTMS has acted as a model for various other states and UTs such as Assam and Chandigarh.

Till this year, several states have had in-service training focused on the early grades. E.g. MP, UP, and WB (in EGRaN) had training developed in consultation with Pratham, while HP implemented training with support from Learning Links Foundation. Similarly, several states have had training informed by the work of LLF or CARE or Eklavya in language learning, and Navnirmiti and Jodo Gyan in mathematics.. Prior to this too, state SCERTs have developed and implemented early grade programmes.

Issues/Needs

Though documents make enabling policy provisions, including the staffing of high level teacher educators, incorporation of andragogy, ongoing TPD and specific training for Grade 1

teachers (though duration proposed is limited), and implementation remains a big issue. Key issues related to teacher training emerge from the fact that despite the investment in the process, there is little to show in terms of transformation in teacher performance or increase in student learning.

While evaluation of state's in-service programmes are rare, our interactions with experts and state personnel, along with field observations, reveal that:
- Planning for training tends to be limited and insufficiently informed by expectations emanating from the LOs and gaps observed in current practices of teachers vis-a-vis those. The evolution of a teacher's training needs of the course of her career are not taken into account, with immediate requirements being focused on.
- Though 'needs-based' and 'school-based' training have been implemented before they have been limited by poor understanding of needs and poor ability to address needs that have arisen (e.g. in MH, UP and earlier in Karnataka)
- Very often trainers themselves are unable to implement what teachers are being asked to. Consequently there is a lack of an experiential approach due to which teachers do not get to experience what they are required to deliver in the class.
- In the absence of articulated performance standards pointing to what will be different after the training, there is a lack of direction and follow up is difficult, as is assessment of the effectiveness of training
- Follow up has been limited in nature, with the CRCs and BRCs often diverted towards other tasks (especially data collection)
- Poor institutional development of DIETs, BRCs and CRCs (elaborated in next section)
- In some states, training content is decided by NGOs who may not be aligned closely with the state curriculum or have the capability towards this. Teachers may also end up attending too many training programmes (including CSR ones) that can confuse them as terminologies and approaches do not remain consistent across these.

In order to enable FLN to be practiced effectively in the classroom, the following needs emerge –
- There is a need for training to be experiential – i.e. teachers should actually experience in the training what they are expected to generate for their children in the classroom. For this, the phased training should lead to making plans basis experience in the classroom as well as in the workshop. Training content should be contextual.
- The training design needs incorporating focal LOs for given periods, integrating MGML practices compulsorily.
- The training design needs to be closely around the academic and pedagogic limitations of teachers, including conceptual learning. Data on teacher assessment can contribute to this, and enable a shift away from the one-size-fits-all form of current training to one that is more specific to teachers' needs.
- Clear outcomes in terms of changed practices need to be articulated and training built around these.
- An agreed upon means of assessing teacher training and its outcomes (in terms of teacher performance) is required.
- Teacher support needs to be built around dialogue with teachers on the changes they are able (or not) to bring about in their classroom practices.
- Where practical, school-based training may be considered.
- Training model that includes SRG/DRG need to be planned efficiently.
- Including states in training design and training of its team would bring contextuality and increase effectiveness.

- Specific training is needed for teachers dealing with children in the Foundational Years.

Recommendations

- In order to ensure progress on FLN, states should decide on a target for improvement in students' learning levels and fix a timeline for achieving the same. Performance standards expected from teachers should be developed against the targets set (these may grow incrementally over the years). Trainers should be rigorously prepared for delivering the required training, with the effectiveness of each teacher training being measured. States could then review and realign their training programmes based on the analysis emerging from this. The mobile based performance monitoring already in use in many states could easily be adapted towards this.
- Teachers should be provided with support materials that they can adapt to their context as mentioned in the section on TLM.
- MHRD should set up a taskforce to help states review and align their training, and also prepare their key resource persons/master trainers. As part of this, a series of national workshop may be held to help states evolve processes and capacities for evaluation of in-service training.
- In order to reduce conflicting messages to teachers, the activities of each external agency (e.g. NGO/CSR groups) working within a state should take place within the purview of the framework derived from the learning outcomes as described in the previous section.

Case Study

Ignus Pahal supported the State Project Office, SSA, Uttar Pradesh, in running an intensive, target-oriented programme under Padhe Bharat Badhe Bharat in the year 2018-19. This programme, called TELOS (*Targeted Enhancement in Learning Outcomes through Supportive Supervision*), ran in all the primary schools of five districts. These were – Agra, Bareilly, Gautam Buddha Nagar, Prayagraj, and Varanasi. TELOS adopted an alternate cascade approach to teacher training. Though the traditional geographical layers of the cascade were retained, the issue of transmission loss was mitigated by utilising a training method that relied heavily on local context, resources, and needs. Since the workshops did not rely on a centrally created, predefined script or manual, the trainers at all levels were able to address contextual issues using methods they acquired in their own training of trainers.

In each district, a District Resource Team (DRT) consisting of 15 members was set up. These members were selected based on their demonstrated record of academic performance, community engagement, experience. Ignus Pahal conducted three trainings for the five DRTs centrally at Lucknow. These trainings were spaced apart by 2 months, giving the teams enough time to engage in field activities. The DRTs would then conduct trainings of the Block Resource Teams (BRT) in the district who would then further train all the teachers in their respective blocks. At both of these levels, an Education Quality Officer (EQO), a member of Ignus Pahal's team, would support the trainers during the workshops.

Instead of providing the DRT and BRT members with standardised training modules, they were supplied with suggestive frameworks instead. Using this framework they could developed the session plans and materials for their workshops themselves. Additionally, these resource teams and teachers in schools developed activity banks for lessons and shared amongst themselves. Nonetheless, certain pedagogical methods and approaches were highlighted and emphasised as a springboard for ideas.

In the year 2019-20, Ignus Pahal is going to scale up this approach to 1.5 lakh primary schools in all 75 districts of Uttar Pradesh with support from the SSA and UNICEF.

Teacher Support and Monitoring

Background

Block and cluster level resource centres were the cutting edge established with the intention of providing last mile connectivity to inputs under the SSA. The BRCs have typically employed a team of resource persons along with an MIS coordinator, a data entry operator and an accountant-cum-support staff. While the CRC employs a singular coordinator who is also the academic resource person for the cluster this post is typically held by the seniormost head teacher of the cluster.

The documents lay the supervisory role of cluster and block resource persons as important. These roles are looked at, as academic and administrative support roles. The roles of SCERT and DIETs being specific, the documents talk about inter-linkages to improve teacher support and monitoring. They see the role of administrative officials (BEOs) as crucial. They envisage use of technology to enhance teacher support and monitoring.

The role of the BRCC and CRCC were envisaged to be academic in nature. However, over the years these supervisors have been reduced to administrative tasks with little academic input emerging from their work.

While the PAB has typically approved funds for salary, travel allowance and contingency for BRCs and CRCs, in the year 2019-20 a special Mobility Support grant of Rs. 1000/- per school is being made available to CRCs. According to the PAB, the CRCCs are requested to visit the schools at least once in two months and upload at least 5 reports for each school in a year on a Mobile App based platform which is being developed by the MHRD.

At the implementation level however, there are concerns regarding vacancies of supervisors, of monitoring roles of CRCs and BRCs, a lack of clear scope of roles - administrative and academic. These supervisory staff are also hampered by having to use monitoring tools that are vague, subjective, and often require only putting tick marks or open-ended observations without a clear set of expectations to do this against. This results in the sequence of change or improvement not being apparent, so that progress against earlier observations is difficult to mark. Most supervisors are also not in a position to help teachers when they do ask for it. The insufficient funding for travel for school visits has historically prevented Block officials from supervising schools.

Issues/Needs

The concerns arising from this analysis are –
- Lack of clarity on the administrative and academic roles of supervisors; they need to be redefined as mentors, and seen as having a set of skills rather than a position
- They are unable to follow up and provide support on ideas and concepts that teachers find difficult
- CRCs and BRCs are unable to form professional learning communities among teachers
- Monitoring and teacher support tends to remain weak in the absence of effective tools and supportive supervision/mentoring capabilities among the CRCCs and

BRCCs. There being no performance indicators for them it is difficult to assess how effectively they are doing their work.

- Because of lack of clarity of roles and linkages between SCERT, DIETs and BRC/CRC units, the latter may fail to provide field inputs to the institutions (eg. feedback on a new curriculum/textbooks/training, or the status of teacher performance). Similarly the inputs needed from the institutions do not flow to the sub-district units (eg. specific action or inputs required to support teachers in improving classroom practices or their subject understanding)
- With the use of technology, BRCCs and CRCCs are now flooded with enormous amounts of data regarding schools and teachers about which they are unable to analyse or use. This is because the objectives for collecting that data were not clarified beforehand. They also may not have access to data that they have collected which limits their ability to effect improvement. Overall data related capacities are very poor.

Recommendations

1. Academic and supervisory roles of CRCs and BRCs should be clearly delineated. At present, the job charts in place have far too many roles and responsibilities, without prioritising of academic support roles.
2. An observation tool to assist supervision and support to teachers can be made. This could be built around the performance standards and indicators being focused upon by the state. It could also be adapted for use through mobile phones thus enabling near-real time data.
3. A national resource repository for curated sharing of good practices could be developed. This could benefit (from) the cluster and block-level meetings of teachers.

Role of Teacher Support System

In order to ensure foundational learning, their general role in supporting teachers would need to specifically include:

- following up from training related to FLN, along the expected performance indicators
- supporting teachers in adapting generic inputs to their specific school conditions
- providing teachers with a wider range of activities and materials to use in their classroom
- doing sample assessment to help teachers understand the degree to which they are succeeding
- analyse learning related data of their cluster/block in order to know the overall weaknesses or schools/clusters that need special attention in order to boost performance

Given these expectations, some questions that arise related to the supervisory cadre are –

- Since the posts of CRC/BRC were conceived under the SSA, what would be their changed roles and responsibilities under Samagra Shiksha? Would their jurisdiction expand to cover secondary and pre-primary?
- How does the concept of Cluster Resource Centre work with the proposed idea of School Complexes under the draft NEP report?

- It appears that under, *Parivartan* - the Integrated Teacher Training Programme, CRC/BRC coordinators will receive the same training as teachers from the SRG. Since their roles are more supervisory, how will that be addressed in the trainings?

Case Study

Ignus Pahal supported the State Project Office, SSA, Uttar Pradesh, in running an intensive, target-oriented programme under Padhe Bharat Badhe Bharat in the year 2018-19. This programme, called TELOS (*Targeted Enhancement in Learning Outcomes through Supportive Supervision*), ran in all the primary schools of five districts. These were – Agra, Bareilly, Gautam Buddha Nagar, Prayagraj, and Varanasi.

The objective of the programme was to bring an improvement in student learning levels by making the supervision role of cluster, block, and district-level supervisors more supportive, performance-oriented, and data-driven. For this, a near real-time data collection system was set up. Using descriptive indicators, decided through consultation with the state, data was collected on the performance of both teachers and supervisors. The District Resource Teams and Block Resource Teams set up in the districts consisted of teachers, head teachers, NPRCCs, BRCCs, DIET faculty, and District Coordinators - Training (DC-T).

Observation data was collected in an overlapping cascade manner wherein each level observed all levels below it in the cascade. This data was analysed centrally by Ignus Pahal and the analysis report was shared with the teams on a fortnightly basis. Using this data the teams would plan their field activities in a need-based manner. Targeted support was provided to the right region in the right domain instead of a general one-size-fits-all approach. The DRT and BRT members received inputs from Ignus Pahal in a consistent manner through interaction in workshops, WhatsApp groups, or over the phone. Both Ignus' academic team and its Education Quality Officers (one in each district) would routinely visit the field to offer on-site support as well.

This approach utilised the strengths of the existing government system and only optimised its processes in a non-invasive manner. The benefit of this was that the programme was seen as a way of working rather than a one-off project. In the year 2019-20, Ignus Pahal is going to scale up this approach to 1.5 lakh primary schools in all 75 districts of Uttar Pradesh with support from the SSA and UNICEF.

Instruction Time

Background

The guiding document to PBBB suggests that out of the 200 school working days available in an academic year, the 800 instructional hours could be looked at with a break up of 500 instructional hours for language and 300 hrs for early mathematics. This is in accordance with the RTE Act 2009 (GoI, 2009, p. 13). Out of the 4 instructional hours available per day, 2½ hrs could be earmarked to reading, writing and language and 1½ hrs for Early Mathematics. In addition, as part of the RTE rules, most states have stipulated the instruction time along similar lines.

Experts argue that in terms of time allocation language should be privileged over mathematics at the foundational stage as development of language faculties of the child strongly affect her later performance in all spheres of education.

Issues/Needs

Some specific concerns with regards to instruction time are –

- The anticipated amount of instruction time (800 hours according to PBBB) is not available because the school does not actually run for the stipulated number of days (150-180 days according to studies by state SCERTs and departments in the past).
- This is further reduced by activities related to administrative duties such as during elections and census.
- Given that the majority of teachers are teaching in multigrade situations, this time is split between classes, thereby reducing it even further. Because of this diminished time on task, it is not surprising that learning levels are low.
- In PBBB, the entire instructional time is allocated to only literacy and numeracy, whereas children also need activities for physical development, (unassisted and assisted) free play, environmental studies and social development which are difficult to incorporate within this time.
- Mechanically enforcing instruction time through surveillance rather than encouraging its effective implementation is detrimental to learning.
- In a manifestation of a kind of 'mission creep' the roles of teachers have begun to include many other non-teaching tasks, leading to a decline in instructional time.

Recommendations

1. A more realistic estimate and allocation of time between the subjects (and within as well) be made. States may need to undertake short-term research studies to record and analyse the actual number of working days to arrive at a more reliable estimate.
2. Teachers may be supported in effective planning to utilise the time they actually have. This could be effected through planning guidelines or simple apps, which help teachers make the best use of time and other resources, especially for administrative work.
3. On a pedagogical front, teachers should be supported with alternative ways of working in multigrade, multilevel situations that treat them as a resource and not an obstacle. These methods should be incorporated in teacher training programmes.

Case Study

Organisation for Early Literacy Promotion (OELP) divides it 2-hour instruction time for literacy into the following blocks –

1. Block 1 (30-40 mins) — Talk time and reading
   Pedagogic processes in this block include:
   A. Conversations and talk based on a theme through open and closed questions which help children to draw on their experiences; connect with deeper aspects of books, pictures and other texts and that encourage children to think, draw conclusions, reason etc.
   B. Read Aloud- The focus of the pedagogic process is on strategies to be used for a) Pre-reading b) During reading and c) Post reading d) Questioning that can generate higher order thinking.
2. Block 2 (20 mins) — Word study & vocabulary
   This time is considered important especially for facilitating transitions from home language to school language. A variety of word activities and games have been developed. They use the displayed print in the classroom and more specifically the

> words in the word wall. Word s in the word wall include words constructed by the children as well as words from conversations or Read Alouds.
> 3. Block 3 (30 mins) — Writing and expressing
> Children are encouraged to use a variety of natural ways to express their ideas in creative ways.
> 4. Block 4 (30 mins) — Skill building for reading and writing
> Skill building focuses on both foundation skills and higher order thinking skills.

Case Study
Language Learning Foundation uses a time slot of 90-120 minutes per day to include activities related to four major components of oral language, word recognition, reading, and writing. Referred to as the four block approach, these can be implemented in an integrated manner. It is important however, that children spend time working on all four blocks on a regular basis. These blocks are –
1. Oral language (interactive storytelling)
2. Word recognition (decoding, phonological awareness, activities of word level)
3. Reading (guided reading and independent reading by children)
4. Basic skills for correct writing and creative writing

Teacher Resourcing and Deployment

Background

The RTE Act of 2009 states that teacher vacancies in schools should not exceed 10%. Recruitment has typically been done keeping in line with the pupil-to-teacher ratio (PTR) recommended by the RTE Act. The RTE Act prescribes that the PTR should be maintained at school level at 30:1 and 35:1 at primary and upper primary level, respectively. It also provides that there should be at least one classroom for every teacher. However, the Act also prescribes that the Pupil-Teacher Ratio (PTR) in schools should be maintained as per the following specified levels for classes I to V:

- Two teachers for up to sixty admitted children
- Three teachers for 61-90 children
- Four teachers for 91-120 children
- Five teachers for 121-200 children
- One Head Teacher, other than the five teachers, if the number of admitted children exceeds 150; and the PTR (excluding Head Teacher) shall not exceed forty if the number of admitted children is above 200.

Given that most schools across the country fall in the small school category, predominantly below 100-60 students, this leads to the 'multi-grade' situation (around 40% of schools in the country are reported to have more than one class per teacher). While several states report teacher vacancies (e.g. Haryana has 2200 vacant posts at elementary level and UP 1,80,000) with recruitment being held up due to various reasons including court cases, there are also 'surplus teachers' (from schools that have been closed due to falling enrolment, e.g. in TN and MH; in West Bengal, there being 60,000 surplus and 33,000 vacancies; Assam 23,000 surplus teachers and 23,000 vacancies), indicating that the perennial issue of irrational deployment continues. Despite the thrust on filling vacancies over the last few years, 4.3% of schools are still reported to be single-teacher schools. In some states, teachers work under the Education Department but their salaries are released by a different management – often

municipal corporations or, as in the case of Maharashtra, the Department of Rural Development and Panchayati Raj. This causes a conflict as the salary-issuing authority can easily arm twist the teachers into doing non-academic work.

As teachers are recruited as a state cadre, most states have to deal with a spatial imbalances wherein urban pockets often have surplus teachers while rural or remote areas face situations like single-teacher schools. The PAB has regularly asked the states to rationalise deployment. States like Assam have emerged with good practices where teachers have been deployed according to the different linguistic regions of the state yet data shows that this hasn't entirely been effective in dealing with the issue. The guiding document to PBBB suggests that a teacher be earmarked for Grades I and II. However, this has rarely been put into practice with schools often looking at Grade I as a 'school readiness grade' and appointing a new teacher or the head teacher for the same.

The Samagra Shiksha Guidelines clearly states:
- *"The recruitment and other service matters of teachers are under the domain of State/UT governments and the Central government is only to provide support as per the availability of funds"*, and,
- *"There will be no separate teachers as sanctioned by the Centre … all teachers are ultimately the responsibility of the State/UT government."*

The PAB too states: *"There is no dual cadre of teachers – only financial support for additional teacher salary would be provided under the Samagra Shiksha."*

Therefore, the creation of a teacher cadre is ultimately subject to the State/UT's ability and desire. States have adopted different measures to address this over the years. Madhya Pradesh has for some years had dedicated teachers for Grade 1-3 but most schools have low enrollment and thus only have 2 teachers which effectively turns the school into a single-teacher setup. Uttar Pradesh makes it clear that it is not practical to have a cadre. Tamil Nadu too has indicated that if they have a separate cadre, in a 2 teacher primary school they would have two teachers belonging to different cadres, leading to management issues, including those of service rules and codes. Overall, while there is openness among states to the idea of allocating a teacher to classes 1 and 2 (and ensure that this teacher is appropriately trained for these grades), the feeling is that having a separate cadre may not be administratively viable. For instance, UP used social media to get teacher feedback on the profile of the teacher who should be asked to teach grades 1 and 2. In Gujarat, the HT often teaches Grade 1. Some officials expressed the feeling that ultimately it should be for the school head to decide on allocating a teacher to early grades.

States are moving towards utilising digitised systems for making teacher deployment a more transparent process. Karnataka's TTMS again acts as a model for this. Other states are looking at ways whereby teachers could be given grades/points that are recorded in a software system; transfers will then be done based on the points accumulated by the teacher.

Issues/Needs
Key concerns with respect to teachers include the following:
- Vacancies, rational deployment, effective use of surplus teachers are aspects that PABs have been emphasizing. Due to a variety of reasons, progress has been limited in this aspect. One consequence is that a larger number of schools face multi-grade situations than is justified by the numbers.

- The issue of dedicated teachers for grades 1 and 2 is only now beginning to gain ground, with some states displaying concern and taking steps. However, this needs to be a regular feature rather than an after-thought.
- While a majority of teachers of foundational grades face multigrade and multi-level situations (as indicated by data on learning achievement), the training of teachers does not seem to be taking this into account. The teacher training modules of states examined by our team revealed that the greater concern is for the advocated methodology rather than how it would function within the ground realities that teachers and children actually face.
- While funding has often been available (as can be seen in the sanctioned posts and PAB allocations), states have been unable to recruit due to reasons beyond their control (especially court cases) and *this situation does not look like it will improve very soon*.

Recommendations
- Good practices in deployment (like in KA, TN, AS) may be shared and discussed with states.
- Profiles of teachers suited for foundational classes may be shared and local officials (including HMs and SMCs) may be encouraged to allocate the best teachers for early grades.

Case Study

Department of Education, Karnataka uses a computerised Teacher Transfer Management System (TTMS). The system receives transfer applications from teachers online and prioritises these on the basis of reasons indicated in the request. Teachers select their preferred place of posting from among places available that are shown on the computer. The software prioritises the reasons as per the Teacher Transfer Act 2007 and as per the zone (zone A, B or C where zone A has least weightage and C has maximum)*. The software ensures that only 5% of teachers are transferred every year.

Zone A: Zilla HQ/Taluk HQ/Highways/Bangalore City area; Zone B: 5 km to 15 km radius from Zilla HQ/Taluk HQ/Highways/Mysore-Hubli-Dharwad Municipal Corporations; Zone C: Beyond 15 km from Zilla HQ/Taluk HQ/Highways/Areas with population less than 5 lakhs

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Case Study

Transfer and Recruitment Policies in Karnataka and Tamil Nadu

Teacher transfer and recruitment policies in Karnataka evolved over time and were institutionalised by the government through legislative means (Teacher Transfer Act, 2007). This system has a high degree of acceptance across the political spectrum. In Tamil Nadu, elements for a transparent system for recruitment and transfers exist, but are yet to be institutionalised.

In both states, consensus was built across the political spectrum, levels of administration and the community of teachers on the need for reducing individual discretion and promoting transparency to teacher recruitment and transfers.

While Karnataka introduced a teacher policy through an act of the legislature, Tamil Nadu opted for executive and administrative orders. In both cases, bipartisan consensus on key reforms was made.

Karnataka built in measures to address the needs of the teachers unions (members of such association also have priority in the criteria for transfers) and the bureaucracy (inclusion of penalty transfers from one zone to the other) although this is should be seen more closely.

The transfer and recruitment policies were made complementary to each other. They were drafted to address systemic challenges while being sensitive to teachers needs at the same time. For example, recruitment and transfer policies addressed the shortage of teachers in remote areas and need for redeployment from excess teacher schools to others jointly. The estimation of vacancies took into account the transfers that have taken place and the provision of first posting only in rural areas together with the rule of no transfer for the first five years to ensure that schools in the far-flung areas do not face shortages of teachers in Karnataka. The introduction of zones (A, B and C) helped in addressing the issue of teacher shortages in remote areas in Karnataka. The practise of equalising the proportion of unfulfilled posts in all blocks and districts ensured that, at any given time, the percentage of unfulfilled positions remained largely the same in all the blocks and districts of the state.

Introduction of this technology driven online transfer system, required consistent efforts to build familiarity and comfort with technology and readiness to engage with it (Ramachandran, V. et. al., 2018, pp. 113-115).

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Incentivising States / Increasing Focus on FLN

Background

In the last two years, the Performance Grading Index (PGI) has emerged as a catch-all metric to streamline the focus of the states towards adopting a holistic approach. In the past, performance on NAS has been used to inform the approval of funds in PAB meetings. Other nudges have also been employed such as bifurcating the planning heads in primary Grades to I-II and III-V.

PGI uses existing data sets like the UDISE, NAS, Shagun and MDM portals to assess states across five domains –
1. Learning Outcomes and Quality
2. Access
3. Infrastructure and Facilities
4. Equity
5. Governance Processes

While norms and stipulations set by the RTE Act or the PAB have been strictly adhered to, states have responded in a variety of ways to central programmes and schemes. For example,

PBBB was a flagship programme of the government launched in 2014 under the fold of SSA. However, not all states adopted the programme completely, often choosing to run their own version of a foundational learning programme with different objectives, methods and names (like *Padho Punjab Padhao Punjab* in Punjab and *EGRaN* in West Bengal) or continuing their longrunning efforts (like *Pragya* in Gujarat and *Prerna+* in Himachal Pradesh) under the fold of PBBB.

Issues/Needs
- The states feel that the central bodies need to give more space to the work that the states do. Often materials developed centrally are enforced despite the states already making use of something similar and more contextual; the Learning Outcomes developed by the NCERT are one such example. This leads to the feeling among the state-level stakeholders that following central guidelines would deter the state from doing good work. [GJ, HP]
- Though the PGI documents propose allocation of points/grades based on objective criteria, these are not always specified beforehand. The states receive guidelines (NAS results or PGI reports) after they have already been implementing for some time. States, therefore, feel that the centre should communicate more clearly and well in time for them to be able to incorporate them in their planning process, and the responsibilities for bringing about improvement must be shared among various departments within a state as well as with the centre. Overall, states have expressed the need for a streamlined process.

Recommendations
- An agreed upon long-term framework for rating states' performance with a focus on FLN may be utilised to incentivise states. This could potentially be a part of the PGI with related data being accumulated through UDISE+ and Shagun portals.

Among the suggestions emerging from discussions with the states and experts are:
- Incentive guidelines should be in accordance with planning guidelines.
- Incentive guidelines should spell responsibilities for centre as well as states.
- Transparency on proposed and allocated funds would be helpful.
- For any programme, essentials should be spelt out clearly and the desirables should be flexible and left for the state to implement as per context.
- Fund flow process should incorporate changes to address delayed funding and submission of expense statements.
- For more effective attainment of better grades in PGI, states teams shared that long-term (perspective) plans could be supported, with the AWP&Bs drawing from these. Thus the PGI indicators would also run for the duration of the perspective plan.
- Finally, as of now learning in the Foundational Grades does not figure in the PGI. In order to establish the salience of this critical phase in children's education, it is imperative that this be part of the indicators being used to rank and incentivise states.

School Readiness and Pre-primary Schooling

Background
Traditionally, pre-primary schooling has largely remained outside the folds of the MHRD as the RTE Act and SSA only looked at the 6-14 year age group. Due to Integrated Child Development Services (ICDS) being run by the Ministry of Women and Child Development (MWCD), education departments have refrained from making efforts in this area. However, the Samagra Shiksha scheme proposes to support efforts of state governments in providing

pre-primary education, of up to 2 years duration i.e. for children of the age group 4-6 years, in schools. The draft NEP report too suggests a four-pronged approach for providing pre-primary education –

- strengthening the existing anganwadi to include education component,
- co-locating anganwadis with schools,
- co-locating existing pre-primary schools with primary/elementary schools, and,
- building pre-primary school where needed

The latest PAB has approved funds for training of Anganwadi workers for pre-primary education.

In the case of Himachal Pradesh, about 300-400 SMCs in the state were already running pre-primary classes in their respective schools for the last few years. Therefore, the state felt it imperative to support the move and has now launched pre-primary uniformly across the state. Another pragmatic measure to compensate for the status quo has seen states like Gujarat introducing a "Zero-Milestone" segment in its textbooks. This section is supposed to be covered in the initial 40 days of Grade I and includes pre-literacy and pre-numeracy tasks to meet the purpose of school readiness. Similarly, schools in Haryana too have begun 'Nursery' sections as a pre-school with a view to ensure that children continue in government schools, with the move already yielding results.

Tamil Nadu too has 54,493 Anganwadis, of which 8015 are currently located within school compounds. From these, 2382 schools have incorporated Anganwadis as pre-primary sections (due to existing co-location separate rooms are not required). These are being run with deployment of surplus teachers, who have been provided special training by the SCERT, which also developed the pre-school curriculum. By involving the Social Welfare Department in the training, the state was able ensure convergence and also bring in aspects of health and nutrition.

Issues/Needs

Though setting up government pre-primary schooling facilities helps increase enrolment as it counters the lock-in of private schools, the major issue is the unavailability of dedicated teachers for the same. The primary school teacher(s) have to look after pre-primary which means they have an increased and variable workload along with more trainings and administrative processes to go through. In terms of funding, the centre cannot finance the salaries of teachers unless the state makes new appointments; even then the burden has to be split between the centre and the state. Issues of coordination and mandate have also to be sorted out between MWCD and MHRD.

States and experts have expressed that a mandatory one year of pre-primary in the formal school setup would be of great benefit. This would bring a degree of normalisation given the prevailing variability in access – some children attend multiple years of Anganwadi and others don't get any pre-schooling experience at all.

Key concerns:

- Availability of teachers and infrastructure are likely to act as barriers where Angawadies are not already co-located within schools.
- One fear expressed is that 'academic' content might be taken to younger children (e.g. teaching of the alphabet or reading) for which they may not be ready - hence a close adherence to the guidelines already issued by NCERT may be called for. This implies inclusion of socio-emotional and physical development, critical to this stage, as part of foundational learning.

- Diversity (and the resulting discrimination or neglect) may start early for children in pre-primary classes! One way to address this is to utilise the learner's 'fund of knowledge' and the curriculum and classroom practices need flexibility to accommodate a diversity of experiences.
- Establishing pre-primary school calls for a concomitant school readiness training for teachers which has largely not been a part of training programmes.
- Role of parents and community will require re-imagination keeping the ground realities of limited parent-child interaction time in purview.
- School infrastructure and safety guidelines will be required.
- Linkages between WCD and MHRD to be imagined as both have specific roles.
- Recruitment of teachers specifically for pre-primary is largely non-existent across the country as most places with pre-primary schools make use of primary school teachers or Anganwadi workers – both of whom are already burdened with excessive responsibilities.

Recommendations
- It is important to prepare the school, teachers and the education system including the community for inclusion of 4-6 year olds in school. This implies coordination between WCD and DoE, a close analysis of curricular requirements with sensitivity to the age group, and careful preparation of teachers. States could also develop a framework for the evaluation of the success of their pre-school efforts.
- To compensate for the status quo, practice of including school readiness components at the beginning of early grade workbooks/textbooks (like in Gujarat) could be supported and rolled out across the country.
- Since recruitment causes a burden on the exchequer, surplus teachers available in states could be appointed to newly set up pre-primary schools.

Periodic Assessments

Background

The documents analyzed (NCERT, 2008a; NCERT 2008b) assert that assessment is a pedagogical tool that enables teachers to take decisions in the classroom. An *assessment for learning* entails that a comprehensive and continuous assessment of children helps develop teacher's plan for improvement in the teaching-learning process. Thus the documents stress that assessment is a means to ensure quality. Making them credible and valid by capacity building of teachers in developing good questions can enhance children's understanding (NCF 2005). The RTE Act 2009 mandated continuous and comprehensive assessments as a part of ensuring quality education for all children. For the ECCE and class 1 and 2 stage, NCF proposed that, *"assessment must be purely qualitative judgements of children's activities in various domains and an assessment of the status of their health and physical development based on observation is through everyday interactions."* [NCF 2005, p. 76]

Following from the RTE, the states started conducting formative and summative assessments at stipulated time periods. Some states maintain the summative data (HP, MP, TN) as dashboards/portal to get information of students performance at the block, cluster and school level. These are being used to focus on specific LOs and conduct teacher training basis that (HP, TN) or work on remedial programmes at school level (MP, TN). States have started making questions for the summative assessment on the basis of LOs (HP, TN) and aim to improve upon this. These questions are made at the SPO and SCERT level.

Issues/Needs

This gives rise to three concerns,
- Teachers teach on the basis of content units and summative assessments are made by the SPO/SCERT on basis of learning objectives.
- The teacher lacks understanding on planning teaching-learning basis the LOs and in creating questions that can lead to deeper understanding.
- The data on student assessment provides an understanding on the LOs that need to be worked upon but it does not lend itself to granular understanding of whether the problems lay at the curricular, textbook, or training levels.

Recommendations
- There is a need to align assessment by combining LOs as well as state curriculum and textbooks. Towards this, states may develop their own models and communicate them to teachers through documents, media and training.
- Teachers need orientation on developing high quality assessment questions as well as their contextual application, and the analysis of data emerging from this for effective planning for learning.
- Data from assessments should be collected with the purpose of planning in mind. The data should feed back into the system for accelerated gains.

Key Stage Exam

Background
Documents (MHRD, 2018) assert that the key stage exam is crucial to indicate the health of the education system. Currently, two large scale assessments are being carried out in India. The National Achievement Survey (since 2001) and Pratham/ASER center's 'Annual Status of Education Report' (since 2005).

NAS is a school based survey (conducted on government and government aided schools) to assess grade level competencies. The learning outcomes form the basis of these assessments, conducted on a three-year cycle. ASER is a household based survey to assess basic ability in reading and arithmetic following a linear approach to language at variance with what PBBB advocates.

A succinct takeaway from the analysis of the National Achievement Survey (NAS) is presented below –
- After the RTE Act (2009) there have been two cycles of NAS for Grade III – NAS Cycle III (2012-13; reported in 2014) and NAS Cycle IV (2016-17; reported in 2017).
- In Cycle III, children responded to 64% of language items correctly. The figure stood at 66% in mathematics. In 2015-16, i.e. Cycle IV, national average for language achievement in Grade 3 had increased by 3% but mathematics learning achievement had declined by almost 4%, from 2012-13 to 2016-17.
- NAS 2014 results for language achievement in Grade 3 show low performance in skills related to reading comprehension (locate information, interpret/grasp ideas and infer/evaluate in text).
- NAS 2017 assessed reading with comprehension (i.e. identifies main ideas, details, sequence and draws conclusions) in addition to reading printed scripts on school walls (poems, posters, charts).
- In mathematics, NAS 2014 results for Grade 3 show low performance in skills related to division (understanding the concept of simple division operations), place value (recognizing and arranging numbers in a sequence), multiplication (two digit by one

digit, and simple word problems) and subtraction (three digit numbers with and without borrowing and simple word problems).

- NAS 2017 revealed learning outcomes M311 (Fills a given region leaving no gaps using a tile of a given shape) and M312 (estimates and measures length and distance using standard units like centimetres or metres & identifies relationships) to be among the five with the lowest performance across Grades 3, 5 and 8.

This goes to show that the learning levels across the country have somewhat stagnated in the past decade despite numerous efforts by the centre and states. It also reveals that basic learning is not translating into conceptual understanding or the ability to apply what has been learnt. *This implies the need for a more holistic approach to foundational learning wherein children's achievement does not stop with the basics but translates into the kind of critical higher order learning required* **to do well in later classes.**

In the present academic session (2019-20), a School Based Assessment (SBA) is proposed to be conducted across the country. This is seen as a preparatory effort for NAS 2020 and aims to assess the Learning Outcomes of all children at Elementary level. It is proposed to be a decentralised non-standardised assessment (linking to *"individual learning styles of each child"*) to be conducted by the state setup with an external agency validating a sample. SBA would involve a *"whole school approach"* by accounting for community participation.

Issues/Needs
- One of the issues is that makes it difficult to take these assessments at face value is that the performance of states in NAS and ASER has varied over the years often with no linkage whatsoever between them or with the results of the assessments conducted by the state itself. One reason for this is that assessments are conducted with a variety of purposes, and there have been other changes in methodology, sampling and focus, which then makes it difficult to compare over time in order to derive any understanding of progress made. This absence of standardisation means that while two assessments may both talk about student learning levels – there can be a great difference between the two data sets since one may assess student performance on higher order learning outcomes and the other may look at basic competencies. Even when using standards like NCERT's Learning Outcomes a difference can arise from the fact that different set of learning outcomes are focused upon at different time.
- Assessment-driven implementation of programmes often have to deal with inauthentic data since the functionary at the end of the chain (usually a teacher or CRCC) is not helped to see the purpose of the assessment. Instead, in some cases they may even be threatened with disciplinary action in case they fail to commit to the targets.
- Since assessments exclusively measure children's learning levels (and to some extent teacher performance by implication) but not that of the supervisors, it is hard to see where the "blockage in the pipeline" is, so to say.
- Some states (e.g. MP and TN) have expressed the worry that what the NAS looks for and what they teach (i.e. what is contained in their textbooks) may be at variance. As mentioned earlier, teaching 'content' (what states do) is different from attaining LOs (which is looked for in the NAS). There may also be a variance between FLN programmes in action in the state, the textbooks and NCERT LOs (this was expressed, e.g. by WB-EGRaN, though we could not sufficiently discern the difference between EGRaN and LOs).

- States feel that their own capacities to develop and implement assessment need to be strengthened in order to enable to address their contextual needs. This includes analysis of assessment data at a granular and specific level, as well as converting that analysis into a plan for improvement.

Recommendations

- A longer term perspective plan would be more appropriate for large-scale assessment planning. This will ensure that the research questions are identified in a specific, reliable manner which does not change over the years. The details behind the conceptualisation of the assessment should be duly documented and made available with the data for future analysis.
- As students' learning levels do not reveal limitations at other levels of the system (teachers, HMs, CRCs/BRCs and DIETs), assessment does not get translated into corrective action. Therefore, it is recommended that a "vertical assessment" of performance at all levels be conducted.
- Capacity building related to the development, conduct and utilisation of data emerging from assessments is urgently required by states, in particular with a focus on FLN.
- The AWP&Bs need to strongly draw upon and justify their proposed interventions based on the large-scale assessment data. Though this is already being done (by including NAS performance in PGI), it needs to factor in performance at other levels in the system, i.e. "the pipeline"as well. Examples for this have been provided in Sectoin 3.3B.
- For the purpose of ascertaining the system's health, a majority of our respondents, especially those with expertise and experience in large-scale assessment, strongly felt that a sample-based assessment is efficient and reliable. The value addition of a census assessment appears to not justify the increased effort.

Budgetary Considerations

Current budgetary provisions

Under Samagra Shiksha, the following budget heads oversee the quality aspects of interventions –
- Learning Enhancement Programmes (LEP)/Remedial Teaching: This is divided into Grade-wise segments such as I-II, III-V, VI-VIII and IX-X.
- Assessment at National and State Level: Consists of NAS and SLAS.
- Composite School Grant: To be used towards infrastructure provisioning and materials for learners; to be spent only by the SMDC/SMC
- Libraries
- Rashtriya Avishkar Abhiyan (RAA)
- ICT and Digital Initiatives
- Innovation
- Other quality initiatives
- Support at pre-primary level

In addition, other relevant budget heads for quality are –
- Training for in-service teachers, head teachers, teacher educators and Anganwadi workers
- DIKSHA (National Teacher Platform)

- Academic support through BRC/URC/CRC: Includes TA, contingency grant and mobility support along with a library grant
- Monitoring Information Systems (MIS)

In terms of funding, the fact that there is a dedicated state envelope known to the states allows them to create their AWP&B in a suitable manner. Previously when the envelope was variable or unknown the PAB would often cut parts of the AWP&B that the state desired more than others (it would help in the plans to indicate which priority items should not be cut).. Though this problem has been alleviated, larger states like Gujarat and Uttar Pradesh feel that their dedicated enveloped size is not enough for all of the state's activities and often there are shortfalls. Thankfully, in the case of GJ, the state government is very helpful in this regard and provides monetary assistance wherever required in order to keep the momentum going.

Overall Trends

Data sources: PAB minutes available on seshagun.gov.in/pab-minutes; Accountability Initative's Budget Briefs available on accountabilityindia.in/budget-briefs/

- There is a significant mismatch between funds requested by MHRD for the implementation of SSA and funds actually allocated to MHRD for SSA. In FY 2016-17, MHRD estimated a resource requirement of Rs. 55,000 crore for SSA. However, it received only Rs. 22,500 crore (RE), equivalent to 41 per cent of its demand. Similarly, in FY 2017-18, while the funds requested by MHRD remained the same at Rs. 55,000 crore, the GoI SSA budget for the year was `23,500 crore, Budget Estimates (BE).
- Over 95% of GoI allocations have been getting released to states in recent years.
- The timing of these releases, however, has not been consistent. Often funds are released as late as March. The reason for this delay cannot solely be attributed to MHRD as the funds are only released once the states furnish a utilisation certificate (UC). The process of release of funds is clearly noted in the PAB minutes. The states simply have to adhere to the stipulations mentioned. *We were unable to ascertain all the reasons for delayed submission of UCs, though delays in transferring funds from the state to the sub-district and school levels emerged as one cause. States also lag in submission of the state share, which too leads to delays. It might help, for funds released towards the end of the financial year, to consider extending the duration for submission of UCs.*
- There is great variability in state allocation towards elementary and secondary education; while UP and West Bengal have allocated nearly 90% of funds for elementary education, Haryana and HP have allocated nearly 50% for secondary education instead. Allocation for teacher education lies between 1-4% across all states.
- Teacher salaries makes up 35% of approved budgets, followed by Quality interventions (19%) and RTE entitlements (16%).
- The amount of spillover funds has largely reduced from 2018-19 to 2019-20 as shown in the table below. This change could perhaps be attributed to the consolidation of SSA, RMSA and TE under Samagra Shiksha.

State	Spillover funds in 2018-19 (% of total)	Spillover funds in 2019-20 (% of total)
Assam	14	8.8
West Bengal	17	6
Tamil Nadu	13	3

Gujarat	17	11
Andhra Pradesh	31	18
Himachal Pradesh	21	18.6

- In 2018-19, after accounting for spillovers, more funds were approved for PB, AP, HR than proposed while BH, KL, MH got only 57-63% of their proposed amount approved. There are a variety of reasons for why this takes place. In the case of Punjab, more than proposed funds have been approved for infrastructure and provisioning line items. While for Maharashtra, in many a line item the state had proposed maximum possible funds (for example, maintenance cost of 35 DIETs) but the PAB has only approved a justifiable amount based on the ground reality (only 12 DIETs are functional in the state). There are still other items where less or more funds have been approved by the PAB but the reasons for the same are not mentioned in the reports.
- In recent years, in almost every case, the complete amount of funds have been approved by the PAB for Learning Enhancement Programmes.
- What should be the breakup between foundational, upper primary, secondary and teacher education under Samagra? Though this question was raised by us with different experts as well as state teams, there is no clear answer to the question. As mentioned earlier, states have budgeted widely varying proportions even between elementary and secondary. *It is worth considering if a substantial proportion of the budget could be mandated for foundational classes (as was done with PBBB budgeting for specific classes.*

Chapter 3: Towards a Renewed National Programme for Foundational Learning

3.1 The need

Despite many efforts and expenditure over the last decade, foundational learning levels have continued to remain low, with a domino effect of learning levels in later stages of education. In order to ensure that the learning gaps in the early years are addressed and eliminated within the foreseeable future, there is a need for:

- A streamlined and common approach that is contextualizable without resulting in a number of different initiatives working at cross purposes
- With a multitude of interventions already being implemented, rather than fresh 'innovation' there is a need for a more efficient convergence across various inputs in order to enhance their effectiveness in generating student learning – this involves recombining, focusing and sequencing appropriately
- Accelerating the pace at which learning gaps are covered in the early years as the window for the country to be able to make up for low levels is limited
- Ensuring that an optimal set of resources is made available, including teachers, support materials, instructional time, assessment and monitoring, with the required financial backing, and
- Strengthening the capacity of implementers and institutions such that there can be a sustained thrust on foundational learning

It is to address the above needs that a National Programme for Foundational Learning is proposed. This document presents a broad framework with a limited role for the national level. By utilising this framework, state-specific programmes for foundational learning can be developed, funded and implemented through Samagra Shiksha.

PROGRAMME GOAL AND OBJECTIVES

3.2 Goal

To eliminate learning gaps in foundational learning over the next five years by equipping and supporting teachers, supervisors and systems. The intention is to ensure that by the end of this five year period over 90% children are attaining the expected levels of learning by the time they complete class 3.

3.3A Setting State-Specific Objectives

While states will work towards attaining the overall LOs specified in their curricula, it is advisable that a limited number of clear and attainable outcomes be focused on in each class. The box below gives *an example* of the kind of outcomes that may be aimed at. *It is recommended that each state identify a limited number of focal LOs in language and mathematics, to include both basic and higher order objectives for the foundational stage.* This could be done through a consultative process facilitated by the NCERT or FLN Task Force (detailed later) wherein a few essential outcomes may be common across states.

Given the realities of India's multilingual situation as well as in-country migration, and the language disadvantage faced by children from weak economic backgrounds, there is a strong need for a focus on oracy, especially at the pre-school and grade 1-2 levels. Transition to the school/state language (in multilingual contexts) may be expected to begin in grade 2 and reach a reasonable level of fluency in the state language by the end of grade 3. Finally, the

diversity among children and the multi-grade situation faced by teachers should also inform the choice of focal learning outcomes.

In order to ensure that learning gaps are ultimately eliminated, it is important to set stage-wise, achievable targets for every year, as indicated in the sample below.

***

Sample Focal Outcomes for Foundational Learning Programme by the end of Year 4

*By the end of **Class 1**, over 90% of children will:*
- Speak fluently (in mother tongue) to share their experience as well as in response to picture books, narrated stories and questions asked by the teacher, especially those beginning with 'how', 'why' and 'if'
- attain pre-literacy and pre-numeracy skills as spelt out in the state curriculum
- develop a sight vocabulary and begin recognition of the more commonly used letters
- develop 'number sense' (i.e. an understanding of quantities involved) within 1-20
- speak and interact confidently in the classroom

*By the end of **Class 2**, over 80% of children will:*
- begin speaking in state language in response to classroom processes, including to describe their experiences
- be emergent readers who can recognize most letters and vowel sounds, and read aloud simple sentences
- begin writing words and phrases in response to questions or to express themselves
- begin using mathematical operations with numbers below 100
- begin relating mathematics with daily life situations, e.g. at home or play ground
- be able to collaborate with classmates

*By the end of **Class 3**, over 70% of children will:*
- Speak and read fluently in state language, and answer comprehension questions in writing, including those beginning with 'how', 'why' and 'if'
- Be able to describe their experiences, thoughts and feelings orally in state language
- Use mathematical operations fluently and accurately, with numbers greater than 100, solve word problems, and use mathematics to make decisions in daily life situations
- Plan and collaborate with classmates, and develop supportive relationships

***

3.3B Setting Performance Indicators at Various Levels
It is equally important that once the focal outcomes are identified, these are also linked to the actual performance expected from other stakeholders in order to drive implementation and enable the outcomes to be achieved.

Thus, state teams will need to spell out a limited number of clear performance expectations as follows:

In keeping with the learning improvement targets for year 4, it is expected that:
- Teachers will... (i.e. what they are expected to be seen to be doing in order for the above objectives to be achieved) – A sample may be seen below
- Communities (including parents) will...
- Supervisors will...

- Institutions will...
- Administrators and decision-makers will...
- Planners at the state level will...

Sample - Performance Indicators to Attain Focal Outcomes, Year 2

These are given for teachers; similar ones can be developed for others such as CRCs and BRCs.

1. The teacher creates an equal and encouraging learning atmosphere in the classroom.			
Level 1	**Level 2**	**Level 3**	**Level 4**
The classroom is very quiet. Only the teacher speaks. Negative remarks are made about students when they are unable to answer correctly.	The classroom is mostly silent. Only a few students are allowed to speak. There is no interaction among the students themselves.	The teacher always has a smile on their face. Students speak most of the time. They are engaged in oral activities in large groups.	The class has a lively environment. Each child has the freedom to speak. Students raise questions and make suggestions. An interesting learning environment is created with the help of audio-video content.
2. The teacher makes use of teaching-learning materials (TLM) in an effective manner.			
Level 1	**Level 2**	**Level 3**	**Level 4**
Only textbooks and exercise books are used for teaching.	Along with textbooks, various concrete objects are made use of as TLM as is.	Pictures, poems and stories are made use of. The use of the library is also explored.	Along with textbooks, concrete objects, pictures, poems and stories are made use of as TLM. The library is maintained with the help of the students.

As can be seen, these indicators spell out the expectations and then provide graded descriptors that can be used fairly objectively to rate (or even measure) teacher performance.

This can be developed on the basis of the state-specific Note on Pedagogy (detailed later).

3.3C Incorporate in Planning

The strategies and activities included in the overall quality improvement plan in AWPB and the FLN plan in particular could be informed by both the focal learning outcomes and performance indicators targeted. A Planning Format in keeping with AWPB requirements and MHRD focus for the year may therefore be developed by TSG.

States may then be supported in the overall planning process by the NCERT, TSG, national resource persons / organisations as well as NGOs working within the states.

3.3D Communicate to all Stakeholders

While in-service training remains one way to communicate the focal outcomes, targets, indicators and the plan to all stakeholders, other means may also be used. These include

posters and pamphlets, posts on social media, creation of local learning communities for sharing, use of 'campaigns' and campaign-style material, etc.

Put together, the 4 steps described above are expected to result in a clear, achievable and incremental set of expectations being communicated to all implementers, supported by planning and put into action.

KEY COMPONENTS

In order that the focal outcomes may be attained, the following have been spelt out ahead:
1. Provisioning the classroom and school
2. Classroom and school processes to ensure foundational learning
3. Action needed at the state, district and sub-district levels to support schools and teachers in ensuring Foundational Learning
4. Role of the national level in supporting states in attaining Foundational Learning

3.4 PROVISIONING THE CLASSROOM AND SCHOOL
Enabling Foundational Learning requires the following.

3.4A Stipulate and Ensure Sufficient Instruction Time
Most states have already issued notifications regarding the allocation of hours for teaching of subjects. Taking this further *each state may, in keeping with its context and focal outcomes, allocate an optimal proportion of time specifically focused on foundational learning*. In order to taken an informed decision on this, and make a realistic and reliable estimate along with allocation of time, states may need to undertake short term research. The final allocation of time may also take into account:
- the developmental stage of children, and
- some space for unassisted, supervised play time that allows free, creative expression of the child is required

It is also important to ensure that the required instructional time is not compromised, by orienting HMs and teachers in effective planning to utilise the time they actually have. Planning guidelines or simple apps could be issued to help teachers make the best use of time as well as other resources such as materials.

3.4B Allocate teachers for grades 1-3
Ensuring teacher availability in being able to allocate teachers for foundational grades. With many states reporting surplus teachers and scope for rational deployment, teacher availability can be ensured so that no foundational class is deprived of a full-time teacher. Good practices of some states in teacher management may be shared and adapted by others as appropriate. Teacher deployment within a district or placement of teachers may also take into account teachers' knowledge of local languages.

Some states have already instituted the practice of allotting the grades 1-3 to specific teachers while others have supported the practice of 'looping' where in one teacher starts with a group of children in class 1 and moves up with them to classes 2 and 3. Where there are more than two teachers, the HM / school in-charge / local school complex head or CRC can help take a decision on this to ensure that the early years receive high quality time with the more competent teachers. Profiles of teachers suited for foundational classes may be shared

towards this and local officials (including HMs and SMCs) may be encouraged to allocate the best teachers for early grades.

3.4C Create resource rich environment with contextual, multi-purpose TLM
The need for a diverse range of learning materials beyond the textbooks is strongly acknowledged. Foundational learning is known to benefit from the availability and use of reading materials, workbooks, mathematics kits, and a variety of other learning sources. A print-rich environment is universally recognized as a critical requirement for literacy learning. Money for libraries has been allocated under Samagra Shiksha.

At the same time states also find that there are high amounts of supplied materials lying unused in the classroom; they are making efforts to encourage teachers to use them actively. There is also a case for encouraging schools to make use of funds that have been made available under different heads. Some states have not provided materials of sufficient materials to teachers for the last few years.

In order to operationalise their thrust on Foundational Learning, states may, in keeping with the focal outcomes being emphasized, *identify the optimal set of material required as well as the manner of their use*. Among the options to be considered are the following:
- Unless there has been a long gap in provision of materials, only a limited set of TLM may be added to existing corpus in the schools.
- There is an identified need for high quality reading material,
- There is a strong need for raw / adaptable, multi-use material that teachers can convert for their specific use. This co-creation will increase ownership and context-specificity as well as the likelihood of materials actually being put to good use.
- Contextualisability and cultural-appropriateness is considered highly desirable due to which locally produced / teacher generated materials should be given preference (rather than standardised TLM). This is particularly relevant in multi-lingual contexts.
- Similarly material for unassisted play may be required
- It is important to trigger and monitor the use of TLM that has already been provided over the years.

To operationalize effective provisioning and utilisation of TLM
- States could organise district and sub-district level activities for teachers to generate locally relevant, contextual materials. (DIETs could take lead on this with assistance from SCERT)
- Simplification of procurement and UC processes would enable local procurement of materials
- School follow-up processes may encourage and expand the scope of usage of existing TLM as done in the case of HP in the current academic year

Overall, therefore:
- TLMs provided could include high quality multi-use adaptable material, graded readers/learning magazines/big books and workbooks, along with training in generating locally relevant materials. To enable this to happen, a Guideline may be prepared on the characteristics of the materials (and the combination required) in different contexts - i.e. the kind of material be indicated rather than recommending any specific material. This may be issued by the MHRD with support of TSG.

3.5 CLASSROOM AND SCHOOL PROCESSES TO ENSURE FOUNDATIONAL LEARNING

3.5A Ensure School Readiness through PPS

With the inclusion of the pre-school stage in Samagra Shiksha, there is now scope to ensure that more and more children enter class 1 with the required degree of school readiness. At least one year of pre-primary school has been advocated before children enter class 1.

A phased plan may be developed to introduce pre-schools in the state taking into account:
- Appointment of dedicated teachers for pre-school and preparing them carefully to handle this age group. Similarly, some states have begun deploying surplus teachers as a beginning.
- Requisite infrastructure with child-friendly features. Towards this the BALA concept may be extended to pre-school levels and guidelines may be provided.
- Each pre-school class will have to be equipped with the required set of equipment (e.g. for play) and materials (e.g. concrete manipulables or workbooks) needed at this stage.
- It is also important to issue and follow safety guidelines for pre-schools.
- Convergence with the DWCD for nutrition and health inputs.

Effective school readiness and pre-primary classes will also require the following:
- A close analysis of curricular requirements with sensitivity to the age group, and identification of appropriate practices (including safeguards, that is, clarity on what is to be avoided – e.g. an undue emphasis on the learning of the alphabet or numerals). Keeping in mind the diversity among student backgrounds, foreground the 'fund of knowledge' that children bring with them is likely to prove helpful. The guidelines issued by the NCERT may be analysed for the purpose. Some SCERTs have already developed the curriculum for pre-school along with the training for teachers.
- A careful preparation is required not only for teachers of pre-primary classes but of all teachers and HMs (and other staff if any) to welcome and take a nurturant approach to young children, engage and support them in learning. Similarly, CRCs, BRCs and DIETs as well as administrative staff at state, district and block levels may need to be oriented on the pre-primary strategy, goals and practices desired.
- The role of parents and community too will need to be reimagined, and a renewed community involvement programme, including the revised roles of SMCs, may have to be worked out.
- Till such time as a full-scale pre-primary programme is rolled out it is advisable to continue the practice of including school readiness components at the beginning of early grade workbooks/textbooks.

Overall:
- It is important to prepare the school, teachers and the education system including the community for inclusion of 4-6 year olds in school.
- States could also develop a framework for the evaluation of the success of their pre-school efforts.

3.5B Articulate Pedagogy Appropriate for Foundational Learning

Teaching learning processes – or pedagogy – is what will tie together the various components meant to further FLN and ensure that all inputs are optimally utilised to generate the targeted levels of learning. The question of pedagogy is affected by a few concerns:

- The ground realities that teachers face – namely, the prevalence of a wide degree of diversity, multi-lingual and multi-grade contexts. In a one-size-fits-all approach it may be difficult to ensure learning among all children, especially those from the most deprived backgrounds.
- Given that many children have home languages that differ from the school language, it is imperative that a 'language policy' be instituted that will enable transition from home to school language over the course of two or three years (e.g. by starting with children's home language and then transiting to the school language orally before introducing the alphabet).
- It is critical to utilise teaching-learning practices appropriate to the stage of children's development and cultural context that children come from, and incorporate their socio-emotional and physical development
- The need for a supportive learning environment (including socio-psychological and non-discriminatory).
- As teachers teach according to textbook lessons, they may not cover all or the more critical LOs which may not have been taken into account while developing textbooks. In any case, textbooks are unable to cover many important LOs, such as oracy or using mathematical operations with concrete materials. Hence there is a need to empower teachers to plan their teaching according to LOs.

Over the last 30 years, several field-based pedagogical models have been implemented in India by governments as well as NGOs, with many known to have worked in diverse situations as well as on scale (though they may have been discontinued due to change in governments). *It is suggested that National Sharing Seminar/s be facilitated wherein these are shared. Alongside, available research may also be tapped to help each state identify its own particular mix of methods appropriate for its context. States may then be supported towards a clear articulation of their pedagogical approach and its conversion into performance indicators for teachers, trainers and supportive supervisors (as indicated earlier).* Among other aspects, this state-specific articulation must include the manner in which TLM is expected to be used as well as lessons planned keeping LOs in mind and using textbooks as support materials rather than a curricular frame. Building on feedback from supportive supervisors as well as commissioned research, states could refine their pedagogical approaches to be more effective over the years.

3.5C Plan through In-Class Assessment and Assessment Data

Assessment is a pedagogical tool that enables teachers to take decisions in the classroom. However, it needs to be closely aligned with the pedagogical model adopted and outcomes being focused upon. This implies that instead of conducting assessment purely on the basis of content units (such as textbook lessons), teachers need to assess based on learning objectives derived from LOs. This will also align the in-class assessment with NAS.

Towards this, teachers need capacity building on:
- *planning for teaching according to LOs,*
- *creating appropriate assessment questions,*
- *analysing the data emerging from assessment for effective planning for learning.*

Some states maintain the data from census-based school-wise summative assessments (HP, MP, TN) as dashboards/portal to get information of students performance at the block, cluster and school level, to incorporate emerging insights / focus areas on teacher training, etc. One difficulty with this is that it does not reveal the areas of weakness that need to be addressed. For instance, a low performance in mathematics could be due to non-use of concrete manipulables, age-inappropriate curricular expectations, insufficient instructional time,

language difficulties, limitations of textbooks, the general 'fear of mathematics', poor teacher training or poor monitoring and supervision, or a myriad other reasons. *State-wide data therefore needs to be backed by other qualitative information in order to be able to know 'which part of the pipeline' is affecting the flow of learning and what needs to be done.*

3.6 ACTION NEEDED AT THE STATE (AND DISTRICT) LEVEL TO SUPPORT SCHOOLS IN ENSURING FOUNDATIONAL LEARNING

3.6A Establish Foundational Learning Task Force at State and District Level

In order to be able to efficiently and effectively implement the State Programme for Foundational Learning, it is critical to establish a Foundational Learning Task Force at the state level, with counterparts at the district level. Key responsibilities of these Task Forces would include:

- Setting state-specific focal outcomes along with improvement targets over a five-year period
- Development of the Note on Pedagogy for the Foundational Years and identification of TLM needs
- Identification of performance standards expected from teachers, trainers, CRCs, BRCs and others.
- Developing the Foundational Learning Improvement Plan for the state and orienting district teams in the same, and its incorporation in AWPBs based on (assessment and UDISE) data and situational analysis
- Identification and development of district-level resource teams for the various tasks involved
- On-going (experiential and reflective) CPD for teachers and supervisors around performance indicators
- Obtaining and using Real-time performance data; implementing on-going monitoring at state and district levels
- Orientation of leadership (state, district and block levels) on the ongoing activities

3.6B Implement Focussed Teacher Professional Development

Ongoing TPD for teachers of foundational classes has already been implemented over the last two decades, with various models now being available including school-based or need-based and/or technology supported training. The translation of training into observable changes in classroom practices, however, tends to remain limited. Often teachers may be able to articulate what is required but lack the ability to put it into action. Trainers, too may not possess the capabilities they are expected to generate in teachers. At times, teachers receive far too many training inputs over a short duration that may not be aligned to each other. Evaluation of training effectiveness is rarely conducted, making it difficult to bring about ongoing improvement in the quality of TPD inputs.

- In order to ensure that the required teaching practices are adequately implemented for FLN, there is a need to:
- Conduct in-service training specifically focused on the Foundational Years for teachers who are allocated those classes. This would need to be built around the focal outcomes, the pedagogical model and set of materials chosen, the performance indicators expected from teachers, and the targets set for the year in terms of improvement in children's learning levels and teachers performance indicators. A

recurrent approach involving a few days' training, conducted two or three times a year might help increase the 'stickiness' of training

- These training workshops should adopt an experiential, reflective approach – i.e. teachers should actually experience in the training what they are expected to generate for their children in the classroom, have the opportunity to reflect upon it and then present how they would adopt/adapt it for their own classroom. Teachers should be provided with support materials that they can adapt to their context.
- Develop these trainings around a more rigorous needs analysis – this involves stating the expectations from teachers (i.e. expected performance indicators), observing their current performance against these to assess the gaps to be covered, along with interacting with teachers to know exactly what needs to be focused upon. Data on teacher assessment can contribute to this, and enable a shift away from the one-size-fits-all form of current training to one that is more specific to teachers' needs.
- An agreed upon means of assessing teacher training and its outcomes (in terms of teacher performance) is required. The mobile based performance monitoring already in use in many states could easily be adapted towards this. States could then review and realign their training programmes based on the analysis emerging from this.
- The provision for the training of KRPs be utilised for more rigorous training of trainers, including school-placement for KRPs to implement what they will expect teachers to do in their own classes.
- In order to reduce conflicting messages to teachers, the activities of each external agency (e.g. NGO/CSR groups) working within a state should take place within the purview of the framework derived from the learning outcomes as described in the previous section.
- Finally, MHRD should set up a taskforce to help states review and align their training, and also prepare their key resource persons/master trainers. As part of this, a series of national workshop may be held to help states evolve processes and capacities for evaluation of in-service training.

3.6C Activate Supportive Supervision

While in-service training helps teachers understand what they need to do (and why) it is only when they are supported in their classroom while teaching that new practices actually begin to take root. This is the role of the supportive supervision system (CRCs and BRCs, guided by DIETs and SCERTs). Supervisors may observe teachers, review documents and record their performance (e.g. on a mobile device) and use the data of teachers in their coverage area to take a call on indicators that need strengthening (through further training or teacher meetings) and teachers/schools that need further improvement (though site visits and greater school/classroom-based support). The issue of funding for travel for school visits is now being addressed and should make it easier to implement academic support.

In order to ensure that the targeted improvement in teacher performance and focal learning outcomes is attained, state teams would need to take the following steps with regard to the supportive supervision system:

1. Academic and supervisory roles of CRCs and BRCs should be clearly delineated. At present, the job charts in place have far too many roles and responsibilities, without prioritising of academic support roles. They also need to be seen more as mentors than officials, hence their support role has to be highlighted.
2. An observation tool to assist supervision and support to teachers can be made. This could be built around the performance standards and indicators being focused upon by the state. It could also be adapted for use through mobile phones thus enabling near-real time data.

3. Performance standards and indicators are needed for CRCs and BRCs too, who should be periodically assessed by DIETs.
4. A national resource repository for curated sharing of good practices could be developed. This could benefit (from) the cluster and block-level meetings of teachers.

3.6D Re-imagine Key Stage Exams

Though they require investment of much time and effort, periodic state-wide tests (e.g. NAS or SLAS) act as a means of assessing the 'system health' from time to time. However, the limitations of standardised tests are well known too, and they need to be implemented with caution, especially in the case of young children in foundational years. The following steps would help:

- A longer term perspective plan would be more appropriate for large-scale assessment planning. This will ensure that the research questions are identified in a specific, reliable manner which does not change over the years. The details behind the conceptualisation of the assessment should be duly documented and made available with the data for future analysis.
- As students' learning levels do not reveal limitations at other levels of the system (teachers, HMs, CRCs/BRCs and DIETs), assessment does not get translated into corrective action. Therefore, it is recommended that a "vertical assessment" of performance at all levels be conducted.
- Capacity building related to the development, conduct and utilisation of data emerging from assessments is urgently required by states, in particular with a focus on FLN.
- The AWP&Bs need to strongly draw upon and justify their proposed interventions based on the large-scale assessment data. Though this is already being done (by including NAS performance in PGI), it needs to factor in performance at other levels in the system, i.e. "the pipeline" as well.

3.7 ROLE OF THE NATIONAL LEVEL IN SUPPORTING STATES IN ATTAINING FOUNDATIONAL LEARNING

3.7A Key responsibilities at the national level

As can be seen, the national level would have a relatively limited and supportive role in enabling Foundational Learning to roll out across the country. Some of the key responsibilities of the national level would include the following:

- Bringing together the state teams with NCERT or other key resource institutions as required.
- Development of broad guidelines/framework for classroom, school, district and school level components mentioned above
- In planning, a focused plan for the first three years and pre-school or incorporation of class-wise AWPBs of states (if that is easier)
- FLN Task Force at national level (described ahead)
- Establishment of national and state resource centres / repositories for FLN
- Monitoring of progress
- Public reports on FLN status based on 3rd party assessment, e.g. Linked with Shagunotsav
- National research unit to support on-going research (with evaluation) to improve implementation

- Organising national workshops on issues such as sharing of pedagogical models, practices related to TPD, supportive supervision and assessment, good practices and success stories as mentioned earlier.
- Finally, arriving at an agreed upon long-term framework for rating states' performance with a focus on FLN that may be utilised to incentivise states.

3.7B Establishing Foundational Learning Task Force at the National level:

In order to be able to efficiently and effectively implement the National Programme for Foundational Learning, it is critical to establish a Foundational Learning Task Force at the national level, with counterparts at the state level. Key responsibilities of the Task Forces would include:
- Liaising with the NCERT and supporting the states towards setting state-specific focal outcomes along with improvement targets over a five-year period while agreeing on a minimum set of essential common characteristics across states
- Assist the states in development of the Note on Pedagogy for the Foundational Years and identification of TLM needs, including a guideline for the purpose
- Identification of performance standards expected from teachers, trainers, CRCs, BRCs and others.
- Supporting states in developing their Foundational Learning Improvement Plan and its incorporation in AWPBs
- Identification and development of state-level resource teams for the various tasks involved, including their on-going (experiential and reflective) CPD for around performance indicators
- Monitoring the progress in the states and taking supportive action as needed
- Orientation of leadership (at national and state levels) on the ongoing activities

3.7C Parameters Of Success And Monitoring Required

In order to ascertain the progress being made, the following parameters could be monitored from the national level:
1. *Number of resource persons developed who demonstrate high quality training, mentoring, monitoring and on-site support skills as per performance indicators*
2. *Number/percentage of teachers developed who demonstrate high quality teaching including relationships with children and community, interactive pedagogy, effective use of local and supplied materials, and use of assessment as a learning assurance mechanism as per performance indicators*
3. *Number/percentage of children demonstrating age-appropriate learning levels in language and mathematics as well as social development (school readiness is subsumed in this)*

As mentioned earlier, though the indicators would vary from state to state, a minimum set of essential parameters may be common across states.

3.7D BUDGET / ALLOCATIONS REQUIRED

As can be seen, the national programme is less about increasing budget allocations and more about using existing provisions efficiently, in a targeted and carefully sequenced and coordinated manner to ensure effectiveness in terms of student learning. While funds are available for most components the following might require additional funding and this could be provided through the present AWPB process:
- Development of the Foundational Learning Task Force at the National level

- Development of the Foundational Learning Task Forces at the State level (though money is likely to be available in the provisions with the states for development of State Resource Groups)
- It is possible that in some states extra provision may be required for specific categories of TLM; however, if a case is made with rationale, present provisions should enable that.

3.8 A FIVE YEAR ROLL OUT

Year 1: **Set up phase**
- Create Task Force at national level
- Organize national workshop/s
- Establish state level task forces
- Identify focal outcomes, pedagogical model, performance standards, TLM package
- Set targets
- Establish district level task forces
- Prepare trainers, supervisors, HMs (on teacher allocation and instructional time)
- Communicate with stakeholders
- Take baseline - Measure learning gaps
- Create Foundational Learning AWPB for Year 2
- Develop training, materials, assessment and other requirements

Year 2:
Implement the Foundational Learning Improvement Plan
Reduce learning gaps by 20% against year 1 baseline
Every year the cycle of developing the Foundational Learning AWPB for next year will continue.

Year 3:
Reduce learning gaps by 40% against year 1 baseline

Year 4:
Reduce learning gaps by 70% against year 1 baseline

Year 5:
Reduce learning gaps by 90% against year 1 baseline

Appendix A

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Experts and Institutions interviewed

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2. Dhir Jhingran, LLF
3. Saktibrata Sen, Room to Read

4. Vaijayanti K, Akshara Foundation
5. Pankaj Jain, Gyanshala
6. Sunisha Ahuja, UNICEF
7. Venita Kaul, AUD
8. Geeta Menon, UNICEF, CARE
9. Vimala Ramachandran, Educational Resource Unit, NIEPA
10. Vyajanthi Shankar, CSSL, EI
11. Prof. Minati Panda, JNU
12. NCERT
13. TSG, EdCIL

Documents Analysed

National Documents
- [Samagra Shiksha Framework, 2018](#)
- [Samagra Shiksha FM&P Manual, 2018](#)
- [National Curriculum Framework, 2005](#)
- [Right to Education Act of 2009](#)
- [National Curriculum For Teacher Education, 2009](#)
- [NPD&CF School Leadership Programme, 2014](#)
- [Sarva Shiksha Abhiyan Guidelines, 2014](#)
- [Padhe Bharat Badhe Bharat Guidelines, 2014](#)
- CABE Report, 2015
- [NCERT Learning Outcomes, 2016](#)
- [Draft National Education Policy Report, 2019](#)

State Documents

Uttar Pradesh, Gujarat, Tamil Nadu, West Bengal, Assam, Madhya Pradesh, Chhattisgarh –
- RTE Government Order
- NCF Base Paper
- State Curriculum Framework
- State Los
- CCE Module
- Training Module
- Teacher Performance Assessment
- Monitoring Tools
- Incentive Programmes
- Materials
- Performance Grading Index Reports

(*not all documents were available for all states)

Maharashtra –
- Analysis of reports for visits to 6 districts of Maharashtra for field assessment of foundational learning programme assessment

Data

- Analysis of UDISE to identify predictors of high and low performing districts in correlation with state assessment data for Maharashtra

Assessment

- NAS Cycle 3, Grade III, 2012-13
- NAS Cycle 4, Grade III, 2016-17

Correlational analysis of 2 high performing, medium and low performing states each.

Budgets

- PAB documents from 2016-17 to 2019-20 for Uttar Pradesh, Gujarat, Tamil Nadu, West Bengal, Assam, Madhya Pradesh, Haryana and Himachal Pradesh
- Accountability Initiative's Budget Briefs for the last 3 years
- CBGA Budget Reports for Uttar Pradesh, Tamil Nadu and West Bengal

Appendix B

Data tables from documents, states and experts.

Interviews with national and state level stakeholders and practitioners from institutions and NGOs who have been engaged in supporting foundational learning in India were held. These are juxtaposed with the findings from the documents on identified key areas for informing the programme for foundational learning in India.

The three narratives are analysed to report issues and challenges in areas identified. This informs outlining recommendations to build a foundational learning programme and guidelines for the centre and states.

The data point made by the individual/state is reflected in the brackets for reference. The person/state initials used are,

States

- Himachal Pradesh [HP]
- Uttar Pradesh [UP]
- Gujarat [GJ]
- West Bengal [WB]
- Madhya Pradesh [MP]
- Tamil Nadu [TN]
- Assam [AS]

Individual experts/Practitioners/Institutions

- Vaijyanthi Shankar, CSSL [VS]
- Dhir Jhingran, LLF [DJ]
- Saktibrata Sen, R2R [SS]
- Minati Panda, JNU [MP]
- Geeta Menon, CARE [GM]

- Vimala Ramachandran, ERU [VR]
- Vijayanti K, Akshara Foundation [VKA]
- Pankaj Jain, Gyanshala [PJ]
- Sunisha Ahuja, UNICEF [SA]
- NCERT
- TSG

I. Expectation Setting/ Learning Standards (clear set of expectations from learning outcomes for Grade 1-3)

Documents	Individuals	States

I. Expectation Setting/ Learning Standards (clear set of expectations from learning outcomes for Grade 1-3)

1. Language, forming and sustaining relationships, capabilities for work and action form the basis for informing content and process of learning (NCF, 2005; FGP Language, 2009; FGP Maths, 2006). 2. Learning Outcomes are assessment standards indicating the expected levels of learning that children should achieve for that class. The learning outcomes would help teachers to understand the learning levels of children in their respective classes individually as well as collectively (NCERT, 2016). 3. For quality improvement in education setting clear and measurable goals is required in order that the administrators, planners and policy makers make rational decisions (NCERT, 2016; SMSA, 2018).	1. There should be 3-4 LOs [VS; DJ]. 2. The LOs should be clearly defined [SS; DJ]. 3. They should focus on a narrative base across the discipline [MP]. 4. The competencies and skills need to be unpacked[DJ]. 5. Apart from cognitive skills, it should include psychosocial aspects [GM]. 6. LOs should focus on higher order socio-emotional and cognitive abilities rather than mechanistic aspects of literacy and numeracy[VS]. 7. The state should take the lead in defining LOs[PJ; DJ]. 8. Effective speed and comprehension have to be taken together. If effective speed is the only measure as it is easily measurable, it sends a wrong message. Reading with comprehension is important. Even if the speed is below automaticity, thinking should be there [SS]. 9. Foundational learning should be with the objective of setting a foundation for larger lifelong learning rather than achieving basic literacy and numeracy skills [VK; DJ]. 10. Certain language skills to develop – vocabulary, fluency, phonemic awareness,	1. The NCERT LOs need to be simplified and contextualised. [HP; GJ]. 2. The LOs are communicated to all schools and teachers are implementing the LOs [HP]. 3. The state LOs are developed through a rigorous process. They are clearly stated [UP]. 4. Basic literacy and numeracy is to be achieved first [UP]. 5. The state LOs are connected to each other and can be nested [UP]. 6. We took 5-6 years to define LOs. We require 5-6 years more to implement and see the effect [UP]. 7. The state is making use of its own LOs developed for Pragya programme. For upper primary grades NCERT textbooks have been incorporated because of which certain LOs which were earlier not a part of the state LOs document have now been added (such as estimation and pattern recognition

	creative use, print awareness, reading with comprehension, emotional connection with books, mechanical understanding of script, A/V association Mathematical skills – estimation (of size, length, distance, weight) combined with vocabulary; classification; seriation, sequencing, prioritising; pattern identification and pattern making [VK].	in Mathematics) [GJ]. 8. Learning outcomes and pedagogical processes do not cohere [WB]. 9. Teachers find it difficult to understand and follow the learning outcomes [WB]. 10. The state has its own LOs (SLO) that are adapted from the NCERT LO [MP]. 11. Focus should be on about reading and understanding. Setting a speed like x words/min can be a hurdle in itself [MP] 12. Sometimes teachers do not find material (in textbooks) for recommended outcomes, need supplementary material [MP]. 13. LO is broken down to (measurable/ activity/task) specifics. Focus is on basic competencies presently (first two years) [MP]. 14. Difficulty in distinguishing between knowledge and

		skill – for ex. At what stage do we know child can analyse? –challenge in language. Math LO ok. We have broken them into sub-outcomes – connected with situations [MP].
		15. LOs – we are following them in all classes, but it is also a constraint. The textbook gives scope to do many things, but teachers are required to work to achieve the LOs concerned.

II. TLM (requirement of contextually appropriate, high quality TLM)

Documents	Individuals	States

1. Alongside factual information, textbooks should act as interactive spaces for children [NCF, 2005]. 2. Pluralistic and diverse nature of Indian society makes a strong case for textbooks to be accompanied by several other kinds of materials like subject dictionaries, supplementary books, workbooks, extra reading material and manuals for teachers [Kothari Commission, 1964-66; NCF, 2005]. 3. Grade 1-5 will have workbooks in addition to textbooks in language and mathematics [Draft NEP, 2019].	1. Subscription to good quality material is required in order that the children have access to newer material [MP; DJ]. 2. Two kinds of TLM can be given- raw material and niche material. One the teacher can contextualise and the other are the ones that are helpful in understanding concepts [GM; VR]. 3. TLM should be multipurpose. TLM should create many options for furthering the dialogue. They should make you pause to solve and create more quest in the process [MP]. 4. TLM kit should come with guidelines for teachers to utilise them effectively [GM; DJ]. 5. Culturally relevant material should be got from the context [GM]. 6. Procurement of TLM is a cumbersome process [SA; DJ]. 7. FLN programme needs a lot of drawings, posters. There is no money for essential items like stationery [SA; DJ]. 8. There should be budget for books plus	1. NGOs are developing and printing workbooks and story books as printing by state press is slow- the bureaucratic process stalls it [HP]. 2. States should provide textbooks and workbooks [UP]. 3. Teachers can create their own stories and poems once they get an initial input into stories and poems [UP]. 4. We should not standardise TLM. Teachers should make contextual TLM [UP]. 5. There is sufficient money for library [UP]. 6. Library books procurement is an issue as the NBT does not have enough numbers to supply [UP]. 7. The state has TLM and workbooks in Pragya. Teachers are expected to make their own TLM [GJ]. 8. The main problem is that basic skills are

| | | at storybooks for each child [MP; DJ].
9. In multi-lingual context, representation is important. Instead of translating books, original literature should be written with the tribal context woven in [MP].
10. States feel that they have enough TLM. Now their focus is shifting to utilising them [VR].
11. Students can be involved in this exercise and in doing so they internalise a lot of the processes that they are supposed to be learning [VR].
12. TLM used- picture cards, stories to be read to children, workbooks to be practised and teacher guides. Scripted lessons for phonological awareness and vocabulary. Library establishment- levelled textbooks- decodable texts and vocabulary list [SS; DJ].
13. Scripts help teachers but we are experimenting that we take the script away gradually… Develop teachers | supposed to be taught through the textbooks in classes 1 and 2. PBBB has come as part of LEP (that is an additionality), but as LEP you cannot influence the textbook and the instructional design of the textbook [WB].
9. Last time the state provided TLM was in 2015. Officially nothing this year (maybe via NGOs) [MP].
10. There should be provision for TLM, as it helps clear concepts. Important that TLM provision should be coupled with training teachers in use of that TLM/ support material [MP].
11. Funds for TLM are essential so that teacher can make TLM locally, using local and purchased raw material [MP].
12. Library grant is given to schools but there is now way to know whether the selection of books |

	such that they do not require a script [SS]. 14. TLM should have a maths kit with materials for every concept and a teacher handbook. The teacher should be free to make her own TLM too [VKA]. 15. Materials are critical at the foundational stage. There should be activity corners such as blocks; arts; theatrical/dolls; books etc. that the learners can wilfully engage with, with the teacher offering a scaffolded approach. Children should have the time for free play everyday where they can interact with these materials [VK].	is appropriate or not. 13. In grade I and II, there should be reading cards, games, puzzles, charts [MP]. 14. Funds at school level has now started with the School Composite Grant. Discretionary fund is given to school. We need to push them to spend it [MP]. 15. A large number of TLM has come into schools. For that a lot of fund is required. We have developed our own graded series of books for classes 1-3. Under LEP MHRD gives some materials in a class-specific manner but it is very limited. We could not get what we asked for. E.g. could not provide English-Tamil dictionary. We always get only a small proportion of the money we ask for [TN].

III. Teacher training (timely and appropriate in-service teacher training for grades 1-3 teachers)

Documents	Individuals	States

1. States with population of 1 crore and above to recruit 1 Asst. Prof. for Pre-primary and states with population of below 1 crore to recruit 1 Asst. Prof for Pre-primary in SCERT (SMSA, 2019).
2. Principles of how teachers learn should be central to developing training programmes (NCFTE, 2009).
3. Teacher professional development should be on-going and planned over along term period (SSA, 2011).
4. All Grade 1 teachers will have the opportunity to go through a 5-day capacity development workshop for integrating the three-month long "school preparation module" (Draft NEP, 2019).

1. Teacher training is an issue. Teachers can verbalise concepts but they cannot implement it [VS].
2. Data on teacher assessment and student assessment shows that every misconception the teacher has- can be seen in the student data[VS].
3. Data on teacher assessment assists planning specific subject concepts that the teachers need training on… trainings can be specific and go deeper [VS].
4. Teachers have to be trained for teaching in all situations- for a MGML class a PTR of 1:25 is viable [GM].
5. Class 1-2 teachers should have specific training [VK; DJ].
6. Teacher training and support has to be looked at from the lens of authoritative power as well as such will enable or restrict dialogue [MP].
7. NCERT has proposed reduced level of cascade model to avoid transmission loss [NCERT].

1. Teachers are given need-based training. This is possible due to CRC reports online and performance dashboard [HP].
2. Teacher training should be experiential. Trainers should be experienced in the method too [UP].
3. Fund delays affected two refresher cycles of trainings proposed [UP].
4. Training content is decided by the NGO conducting training [UP].
5. At present the linkages between LO, syllabus, process and content are not specified [UP].
6. There exists no standard mechanism for assessing training assurance [UP].
7. Labelling core concepts differently after every few years confuses teachers. We need to pass on a holistic sense of things. That it is uniform and it is across [UP].
8. Since the same teachers attend multiple trainings by multiple

	8. Teachers should be trained within the schools. It makes it more relevant for her [NCERT]. 9. Teachers should be supported in schools after first phase of training [DJ]. 10. Develop subject-specific knowledge base of the teacher [VR]. 11. Rather than taking 2 people out of the school and training them, the whole group needs to move forward together. This is especially true for equity and gender related workshops [VR]. 12. Focus has to be shifted to localised, need-based trainings [VR]. 13. On-job training and requires a scientific approach- a mixed approach using whole language as well as phonics approach. Scripts help teachers but we are experimenting that we take the script away in a period of three years [SS]. 14. Trainings must involve hands-on practice with children. A shift in	programmes, it is a problem [UP]. 9. Schedules for teacher training are available. Capsular training modules are prepared for teachers. Master trainers: are trained by people who prepare the modules, because the latter are aware of each and every step. Training is done in every district [MP]. 10. In some cases, training and module development is state are being done by an NGO whose academic level in the area is zero! [MP]. 11. There should be pre-scheduled, on-going trainings. Teacher should decide which training she will attend. 12. We have reduced cascade levels of training- now state trains DRG who trains the teacher directly. This has helped reduce dilution of training [AS, MP]. 13. Need assessment for teacher training –we tried to identify teacher requirements based on student

	methods can only occur when one experiences the new pedagogy themselves [VK; DJ]. 15. One time training is not enough. Sending material, WhatsApp interaction, peer interactions, review meetings. There should be 1-2 resource persons for 30-35 students. A teachers resource group should be trained. A SRG should have some good teachers too [DJ]. 16. This should be for 10 days spread over for 4-3-3 days period. Language is a concern. Centralised module is an issue. MGML classroom elements have to be taken into account. The training should be phased. Some communication should be done during the training, regular communication during mentor visits and review meetings at block/cluster levels. The people who go for school visits should have an	performance (but turned out that help was required almost entire syllabus). Made modules for teacher training [C&T, MP]. 14. Teachers handling grades 1 and 2 need special training to handle children of this age group. We have tried Reading and writing enhancement program with an NGO. This involved module development and training of resource persons. The kit also has TLM (reading cards, story cards, counting tools etc.)-[MP]. 15. Not happy with the NCERT now taking away their training for this year. Need to orient teachers on the newly introduced energised textbooks. SPO is looking for ways to do the training required for the new textbooks, and will look for funds from the state government for the purpose [TN]. 16. Earlier, 200 SRG members were trained by NUEPA/NCERT, and they trained

	academic orientation. 17. The training is as much about beliefs and attitudes as about strategies. Both should be taken into consideration [DJ].	1200 trainers on training methods etc. As the cascade went further down, one issue was that each SRG member had to be involved in this for some 100 days and DRG for 20-30 days. As they were practicing teachers, this kept them away from their teaching work. So that is why they have tried to reduce this by having more stages in the cascade so that RPs at each level have to spend less time [TN]. 17. There is monitoring of training at the district and sub-district level by officials. However, there are no process indicators. Also, no training evaluation / assessment to know how far the training is being implemented in the classroom [TN].

IV. Teacher support and monitoring (teacher support and capacity building for FLN classroom practice)

Documents	Individuals	States

1. The CRC's/ BRP's need to play a critical role in providing academic support to the teachers (SSA, 2011). 2. BEO visit is once in 6 months to assess the FLN situation (PBBB, 2016) 3. NCTE/NCERT/NIEPA need to build a benchmarking framework for quality assurance in all SCERTs and support mechanisms based on the benchmarking results (SMSA, 2019, p. 118). 4. The focus of interventions will be the teacher and use of technology to deliver quality education (SMSA, p. 6). 5. At present, SCERT provides only academic inputs for teacher training, DIETs are focused on pre-service training and BRC & CRC conduct trainings for SSA. In order to ensure strong linkage and better coordination, it would be apt that the role of these institutions and linkage between them is clearly brought out (SMSA, 2019, p. 123).	1. Develop a respectful relationship between stakeholders; leadership should be inspiring [VS; GM]. 2. Concepts and ideas cannot be merely transplanted to a large scale; they must be regenerated for which a coherent understanding of the original concept must be achieved through a series of workshops [GM]. 3. Redefine mentoring - a mentor doesn't come with position, s/he comes with a set of skills (Teachers can be part of SRG) [GM; DJ]. 4. Teachers cannot operate on pedagogy of equality if they do not have any freedom themselves [MP]. 5. Classroom processes and assumptions	1. Gujarat is currently implementing a "Command and Control" model for high-level monitoring of teachers through CRCs [GJ]. 2. Technology has an important role. As administrators we can know what progress is being made and where is help required. This way we get an evidence to celebrate learning [UP]. 3. Informal platforms for acknowledgment of teachers' work is motivating for the teacher. It sustains change [UP]. 4. The budget for monitoring which comes to about Rs. 5000/- per ABRC/BEO is not sufficient [UP]. 5. ABRCs are allocated fixed number of schools. The schools for which ABRCs

	and understanding of teachers should be qualitatively assessed [MP]. 6. Capacity building budget head is usually flexible [GM]. 7. TA for Block people is less for making monitoring visits [RB]. 8. Supervision has to gear towards spending more time (a full day) in the school rather than acting as mere data collectors [VR; VK]. 9. The facets of supervision should be facilitated with indicators for monitoring [VK]. 10. Someone needs to supervise their work on field and demonstrate what can be done. We have to move with the system. There should be review visits and meetings [DJ].	are not allotted do not get supervised. 6. Appointing a dedicated BRP for Pragya has helped localise the support for the programme. [GJ] 7. They are supposed to visit schools, serve as RP but that is not happening and this lacuna is believed to be adversely affecting performance [C&T]. 8. It has been suggested that DRG teach in schools for one month, so that the experience will provide are assigned are supported in more effective manner [MP]. 9. The BRTs and CRCs are required to make 20 school visits every month. Every BRT has 10-15 schools and they have to visit schools

	11. We do not have many people in the system. The block and cluster level vacancies pose a limitation in influencing this work [DJ].	twice a month. Every sub-district official has such a requirement. Now they have prescribed a template questionnaire. Supervisors are required to spend 45 minutes observing one class, fill in the template on teacher performance, student learning levels, observation of student work etc. [TN].

V. Instruction time (number of hours for each class 1-3 for language and maths)

Documents	Individuals	States

1. Adequate instruction time in school each day- Up to 300 – 400 hours (annually) should be set aside for language teaching-learning. Dedicated time during the school day for children to practice reading is critical (SSA, 2014). 2. Literacy (500 hours) and numeracy (300 hours) (PBBB, 2016).	1. To exactly say how much of time-on-task is engaged time, is difficult as there is noise of other variables. This is difficult to establish [VS]. 2. A lot of language and maths can be done when doing EVS. Inter-subject linkages should be explored, i.e., dedicate time for oral and written activities rather than for subject-specific activities [VR]. 3. For literacy, 1 hour for literacy in Room to Read. (27 weeks in a year, 2 letters per week- those letters that the child is familiar with- this is researched and reached at)[SS]. 4. The day (4 hour in pre-school) should be planned with all components in mind. The most important segments of the day are – Morning/Goodbye circle; Activity corners; Freeplay time. Supervised freeplay is essential as this is where a number of executive skills are built [VK].	1. For the programme done in academic year 2017-18 we had set the instructional time for language and maths for 1 hour each [HP]. 2. Instruction time can always only be suggested and not mandated as there is no way of monitoring it. Even as a part of the various programmes in the state, it is always suggested in the workshops that a reasonable split between oral and written activities be maintained in early grade classrooms. [HP] 3. The Pragya programme consists of dedicated oral and written work-time. In addition, there is a mandatory half hour of supervised playtime at the end of each day [GJ]. 4. Current instruction time is as per RTE rules / and given in the State GO/rules [MP]. 5. Every day there are 3 periods of 90 minutes each, with 25 hours of instruction time every week. Of this,

	5. Although PBBB states there are 220 working days, we found in Haryana that a school works for 140 days. And the classes are multi-grade. Class 1 and 2 sit together. Each should have a 90 minutes instructional time [DJ].	there are 4 periods of 90 minutes each, for Tamil, for English and for Maths, covering 18 hours. There are three periods of 90 minutes each for EVS and 30 minutes per day are kept for group work or games or extra curricular activities. Recently, HMs have been given the liberty to make these into 45 minute periods if they want (without compromising on the overall time allocations). One difficulty pointed out by everyone is that teacher has so many other things to do that she does not get enough time to actually teach [TN].
	6. Even in the two grades, there are multi-levels in the class. In this case, we should privilege language. There should be adequate time for grade 1 and 2 for language [DJ].	

VI. Teacher resourcing/Dedicated teachers for grade 1-3

Documents	Individuals	States

Documents	Individuals	States

1. Vacancies not to exceed 10% (RTE Act 2009) 2. It is desirable that there be dedicated teachers for classes 1 and 2 as these are foundational grades (SSA, 2014; SMSA, 2019).	1. Teacher volition is critical- teacher who wants to teach grade 1-2 should be selected for such [RB]. 2. At present the system has a cadre for Primary school. Perhaps we should have a cadre for Grade I and II teachers alone [SA]. 3. Ideally a separate teacher for pre-primary is required [NCERT]. 4. Teacher transfer policy in Karnataka, TN and Assam ensure teacher availability. Assam has 9 regional languages- the teachers are transferred basis language known- this is beneficial [TSG]. 5. Teacher hostels were created during RMSA- these could be used by teachers who are transferred [TSG]. 6. Having a dedicated teacher that covers all subjects and moves with the kids from Grade 1	1. This is not possible to create for the state as RTE norms dictate the staffing as per pupil-teacher ratio (PTR). "Even with 100% teacher recruitment a multi-grade situation would remain." [GJ] 2. It would create a load on the exchequer as staff salaries make the largest recurring expense [HP]. 3. In addition, teacher rationalisation is in progress and almost all areas of the state have sufficient teachers except a few [HP]. 4. Teacher redeployment is difficult because of HC orders. Teachers were redeployed despite this [UP]. 5. There should not be a separate cadre for FLN teachers. This must be left to the HT [UP]. 6. The best teacher in the school is given to teach class 1-2. This practice was initiated with teacher agreement (via social media) [UP]. 7. In Gujarat however the trend is for the HT to look after Class 1 as it is seen as a "school readiness" grade [GJ]. 8. There are dedicated teachers in grade I but they need to cater to other grades too [MP]. 9. Students of grade I, II and III should be attended to separately. Each group

	to 3 even in a MG setting would be a useful idea [VR]. 7. A cadre should exist and should run at equal footing with primary teachers. These teachers should be specially trained instead of simply recruiting volunteers and mothers [VK]. 8. Teacher deployment is a concern. Unless service rules and codes are modified, this will be so [DJ].	has different requirements and multi-grade arrangements do not work at this stage [MP]. 10. What is being done in pre-service training/education and what teachers are expected to do in class are two different things! We need to (re)train teachers - trend that anybody can volunteer and teach doesn't work. Will need teachers for ECE [MP]. 11. TN does not have teacher vacancies, in fact has surplus teachers. Two-teacher schools are the most common [TN]. 12. ABL is able to address the multi-grade situation, according to the group. That is why we have not disposed with it, though it has its own constraints. They have a cadre of teachers from 1-5. Not advisable to split this into two cadres as it will require separate management for just this group and one school of only two teachers will have two separate cadres, with its own management issues [TN].

VII. Periodic assessments (at district, block and cluster levels)

Documents	Individuals	States

1. Assessments and examinations must be credible and based on valid ways of gauging learning [NCF 2005, p. 74] 2. Designing good test items and questions is an art, and teachers should spend time thinking about devising such questions [NCF 2005, p. 74]. 3. At ECCE and class 1 and 2 stage, "assessment must be purely qualitative judgements of children's activities in various domains and an assessment of the status of their health and physical development based on observation is through everyday interactions [NCF 2005, p. 76]. 4. Regular learning assessments at the primary stage are required to ensure that the quality goals are met (NCER T 2016).	1. Assessment should be driven with a planning objective [VS]. 2. Use 3rd party sample-based assessment for driving systemic reform [VS]. 3. While concentrating on LO is important- how these will be measured is as important [VS]. 4. Teachers have to be trained on creating questions. The questions have to be closer to outcomes being assessed [VS]. 5. Assessment for younger children is more nuanced than assessment for older children. It includes assessing socio-emotional aspects [VS]. 6. Assessment data should go back to people who give it. The people should be able to take decisions based on data [PJ]. 7. School Based Assessments (SBA) a census based assessment will be done from this year- All	1. The state follows a semester system wherein a Summative Assessment (SA) is conducted at the end of each semester with two Formative Assessments (FA) being conducted during the semester. The SA-2 data is aggregated at the school level and made available on a public dashboard that records performance data based on geography, grades and learning outcomes [HP]. 2. The state is now making a shift towards developing question papers that are tagged with the relevant learning outcomes [HP]. 3. Assessment should tell about the progress of the interventions [UP]. 4. If teachers are only answerable for the CCE in place, and the textbook chapters do not lend themselves to improving reading [WB]. 5. There is too much assessing, why not

	school data except LO will be recorded and put up on UDISE+ [TSG]. 8. Assessment is only as good as much it helps the teacher learn about her students and take action [VR]. 9. The objective of the assessment has to be clear. The periodic assessments are to help the teacher with the level of the children and which cohort to help [VKA; DJ]. 10. Periodic assessment of student learning should take place within the class and not go beyond the school [VK; DJ]. 11. To gauge the systemic health a sample based assessment can be conducted at an annual periodicity. But these assessments should be conducted without putting pressure on the child [VK; DJ; VS].	stick to a monthly, or quarterly pattern. An overall school assessment is done once a year. Data from the assessment is entered on education portal and grades awarded [MP]. 6. Assessment in itself is good, but the process must be done properly. We see a change (improvement), but it is gradual [MP]. 7. This helps identify learning gap – which teachers are then expected to address. The progress on this can be tracked at cluster, block or state level [MP]. 8. State does develop assessment tools based on LOs but still needs improvement [TN]. 9. State uses this data to help HMs identify which students are not performing well, from std 2 onwards. At the school level, data is use for remedial purposes. Beyond the school level it is for planning purpose [TN].

		10. State still uses QMT format of NCERT, where the CCE outcomes are included. This is discussed during training, with poor performing schools being identified, and officials do discuss this [TN].
		11. SLAS/NAS is also conducted for classes 1-3, though this year they have included class 4 in SLAS to see how last year's cohort has done. From the SLAS they find competencies that are weak across the district, and inform the district teams to include those in the training, and officials to follow it up [TN].

VIII. Incentives for states (redesign PAB and AWP&B process to increase focus on FLN)

Documents	Individuals	States

1. It is proposed that preference in the interventions would be given to Educationally Backward Blocks (EBBs), LWEs, Special Focus Districts (SFDs), Border areas and the 115 Aspirational districts (SMSA, 2019). 2. Funds are proposed to be allocated based on an objective criteria based on enrolment of students, committed liabilities, learning outcomes and various performance indicators (SMSA, 2019, p. 6). 3. The SCERT is expected to prepare a 5-year perspective plan as well as annual work plans. The PAB would approve the plan for the	1. In programmes like Gunotsav (GJ) and ABL (TN) a better relationship and motivation was forged as the leaders were making school visits which inspired the teachers [VS]. 2. Have at least a 3-year plan. Recognise that the school year and the PAB year have a mismatch – research shows a clear relation between delayed delivery of programme essentials (approvals, materials, trainings) and learning levels [RB; DJ]. 3. By laying emphasis on NAS Grade III result in the PAB and asking the states to make grade-specific programmes, states actually started focussing on Grades I and II [SA]. 4. Instead of being prescriptive with the budgets, the Centre has to provide flexibility under the heads along with guidelines and a suggestive list [SA]. 5. States are given 20% of the central share in May. The issue is with delay in UC.	1. Often materials developed centrally are enforced despite the states already making use of something similar and more contextual [HP]. 2. If a programme for foundational learning were to be developed the state would prefer flexibility in its implementation with certain essentials being spelled out leaving the rest for the state to do as it deems suitable [GJ]. 3. PGI is used as an indicator of work that the state has done during the PAB process. The Centre should monitor the PGI index and there should be some process where Centre and State communicate. This can be done by the Centre by directing specific departments [UP]. 4. Fund flow was better before 1993 when there were SPVs. The fund was received directly [UP]. 5. The perspective plans should be made strategically. There should be larger understanding of destination but the tracking of progress should be done on a daily basis [UP].

development of the SCERT (SMSA, 2019).	Since grants are not utilised for the heads they are given for, there is a delay in getting UC thereby affecting the fund flow [TSG]. 6. States can have a consortium with stakeholders and deliberate on issues as diversity, MLE [SS]. 7. Rather than looking for answers, the state should pose the right questions for the critical areas they have to address [SS]. 8. The DPEP is a good model to look at for incentivisation. The states must be facilitated at all steps. The programmes must be run by a team rather than hinging on a singular person. The team should be apprised of all possible scenarios that could potentially occur when looking at the status, the factors behind it, and the possible solutions for improving it [VK]. 9. Indicators of success must be used [VK]. 10. Create a stir all over the country. Make use of modern	6. Line items are fixed during the PAB. Programme is approved in PAB and then the budgets are drawn from fixed line items. There is no so there is no flexibility. The fund flow process is long and tedious [UP]. 7. For fund received till submitting the statement of expense there should be a gap of at least 90 days [UP]. 8. The practice of informing the states about their approved total budget (state envelope) is seen to be useful as it allows the state to prioritise its activities in the AWP&B accordingly [MP]. 9. Constitute State Education Council (like NEC) to ensure that state education policy does not change with change in elected govt. [MP]. 10. Quality framework cannot change for the duration (say, 5 years) of its implementation. On similar lines, there could be a District Education Council. We had given freedom to districts for District Academic Improvement Plan

	communication technology to get people and communities involved[VK]. 11. Grant should not be provided year to year. PAB should give financial sanction perspective plans for three years. There should be a reasonable funding for the same. There should be advocacy about strong foundational literacy critical to closing remediation gaps Good practices should be shared with states and provisions for states to visit other states can be put into place [DJ].	(2013-14). Have revived this again [MP]. 11. Continuity in any program, even if useful, is often hampered because officer changes every 6 months to 1-2 years [MP]. 12. We have federal structure (and should work that way) [MP]. 13. To incentivize give more appropriate material, more teacher training. Make sure we are not opening sub-optimal schools, have better monitored schools [MP]. 14. Though the state is doing well in SEQI they feel they are not fully informed beforehand about exactly what SEQI will be looking at and exactly how it will assess the state. If they know this, they can do better [TN]. 15. Biggest incentive would be to give whatever the state requests for, especially for grades 1-5. They review the budget, but when the financial sanction comes they reduce the money, whereas the budget we presented was made according to our ground reality [TN].

IX. School readiness/PPS (ensure 1 year of PPS)

Documents	Individuals	States

1. FLN for class 1-3 should include components of pre-school (CABE, 2015). 2. 4 pronged approach- strengthen the existing anganwadi to include education component, co-locating anganwadi, co-locating pre-primary school and building pre-primary school where needed (Draft NEP, 2019).	1. We have the responsibility of creating a learner in the early grades. Focus of FLN should be beyond basic LN to developing learners [VS]. 2. Story-telling should form an important component of PPS [VS]. 3. School readiness should look at the psycho-social aspects of the learner that go beyond "work in groups; follow instructions" to feeling of self-worth and resilience [GM]. 4. Since it is difficult to have a common minimum academic background as kids come from pre-schools, anganwadis and others, the child development aspects should be weaved into the curriculum till Grade III [SA]. 5. Getting the community buy-in is essential for success so manifest situations where they can experience	1. About 300-400 SMCs in the state were already running pre-primary classes in their respective schools for the last few years. Therefore, the state felt the imperative to support the move and has now launched pre-primary uniformly across the state [HP]. 2. Though setting up government pre-primary schooling facilities helps increase enrolment as it counters the lock-in of private schools, the major issue is the unavailability of dedicated teachers for the same. The primary school teacher(s) have to look after pre-primary which means they have an increased and variable workload along with more trainings and administrative processes to go through [HP]. 3. In terms of funding, the centre cannot finance the salaries of teachers unless the state makes new appointments; even then the burden has to be split between the centre and the state [HP]. 4. PPS has to be conceptualised by the Centre and communicated to the states. There was a 6 week readiness programme in DPEP in class 1 which was useful [UP].

	the processes [GM; VKA]. 6. To address diversity come to common range of understanding by leveraging learning materials, common vocabulary, shared experiences (humour, curiosity) etc. [GM]. 7. Equity issues have to be looked at as a structural disadvantage and not as deprivation. The richness and positives of a marginalised child's life have to be uncovered and leveraged (Child's fund of knowledge) [GM]. 8. Two kinds of interventions are required- direct and with government-Direct- 1. Parents are important (mothers more so) so it is important that the LOs be communicated in a language she can understand [GM]. 9. Activities and print-rich environment to be created. This should be appropriate for the age group. With the Government- 1.	5. Gujarat has made use of "Zero-Milestone" segments in early grade textbooks/workbooks which are developed with school readiness in mind. 6. It is felt that a mandatory one year of pre-primary in the formal school setup would be of great benefit. This would bring a degree of normalisation to the varied backgrounds of kids – some who attend multiple years of Anganwadi and others who don't at all [GJ]. 7. They have a reasonably good programme in Anganwadis (AW). Unicef has partnered with AUD. WCD has constraints in training, etc., so scaling is slow. School education department also has a one year preschool, because during RTE their admission age was 5; instead of keeping children out of school till age 6 they made the first year as pre-school [WB]. 8. State has developed a one-year preschool curriculum. Problem is that School Education Department itself is not very interested; because it does not translate into dedicated teachers for other policy decisions or supply side inputs [WB].

	There should be a continuity between Anganwadis and class 1 and 2 [GM; VK].	9. Two departments are still there (WCD and School Education) and School Education Department clearly says they cannot handle it [WB].
	10. Present curriculum is overambitious; there is a mismatch between what the textbook expects and what the teacher expects. We need more oral language work done at FLN stage [SA].	10. The whole early learning approach is different from the way SCERT and DIETs operate, they don't have the expertise of dealing with this age group [WB].
	11. For planning a pre-primary programme, the following should be looked at, Lighter bags and subjects as prescribed by NCERT (only3), Sports, library (guidelines on good books), manipulatives, school safety and safety guidelines [NCERT].	11. GOI should make it rule-bound for PPS, ECE, to be with education dept. Some govt. schools have started it and their enrolments have remained strong. Presently there is dearth of officers in the Education dept. Only one person for each subject, who will look after gr 1 to 12 (all related programs) [MP].
	12. No single strategy is going to work across the country. By fixing certain non-negotiables, the states should be given flexibility to approach as they deem okay [VR].	12. Teachers from the primary school are deployed there (because the state has surplus teachers and does not need to appoint new teachers for this number of pre-schools). These teachers were given special training for this by the SCERT, which developed the pre-school curriculum and this training. The social welfare department was also involved in conducting the training.
	13. Possible non-negotiable principles –Health, nutrition and immunization	

	should continue to be delivered by ICDS even if the child is in PPS. Children should get two meals at the school - breakfast and lunch. A trained pre-primary educator should be appointed [VR]. 14. At the pre-primary stage it is important to develop the pre-language and pre-mathematics skills along with other facets of child development such as motor skills, social skills, creative and cognitive development [VK].	13. These Anganwadis were already located within the schools / school compounds – so next year we may need separate rooms [TN].

X. Key-stage exam (census exam for class 3, 5, 8)

Documents	Individuals	States

1. The 12ᵗʰ five year plan focused on basic learning and need for regular learning assessments at the primary stage to ensure that the quality goals are met. This was in line with the recommendations of the Global Monitoring Report 2015 and the Sustainable Development Goals (SDG 4) (NCERT, 2016). 2. Learning outcomes should be the point of reference for conducting achievement surveys. They should be communicated to the parents and community at large (NCERT, 2016).	1. Use data from a larger assessment like NAS/SLAS (sample) to understand what the gaps are; triangulate it with a more granular summative assessment (census) to see where the gaps are; provide teacher training focussed on addressing those gaps as often the misconceptions that a child has, the teacher does as well. Technology still struggles with operational issues in the real world and cannot be just yet seen as a total solution [VS]. 2. State should have an assessment cell [SA]. 3. Rather than showing who is where in assessment, it is important that the assessments show how many are showing positive movement and how many are showing negative movement and planning to improve that [VS]. 4. USA is a prime example of the dangers of having external testing agencies [VR]. 5. Assessment- large scale assessment tests ORF, letter	1. The state already has an MIS dashboard that gives a reliable census-based view of student performance. They are making use of this data for planning inputs for trainings and such. It is felt that a third-party assessment would be welcome if only it brought to light some aspect that the state isn't already aware of [HP]. 2. The state feels that assessments should always done with a purpose. The assistance of the external agency would be sought only in the development of the tools, the actual implementation would be done by the state. [GJ]

	recognition and basic comprehension. This should be supplemented with qualitative assessments as it does not give a picture of orality which is crucial [SS]. 6. Assessments at scale should understand why these are being done- for management efficiency or literacy efficiency [SS; VKA; DJ]. 7. Large scale assessments the objective has to be clear too [VKA; DJ]. 8. Trends of system health can be assessed by doing a sample based assessment once a year [DJ].	