

Human Centered Approaches in Diagnosing Development Challenges

Case Study of School Textbooks in Nagaland, India

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Index

- **Introduction.....5**
- **SCERT Textbook Supply Chain.....8**
 - ▶ Key Stages.....10
 - ▶ Key Stages and Current Timelines.....11
 - ▶ Macro Learnings.....12
 - ▶ Stages, Actors, Learnings, and Opportunities.....19
 - ▶ Conclusion and Next Steps.....23
- **Appendix.....24**
 - ▶ Detailed Supply Chain Overview25
 - Key Learnings by Stage.....26
 - Summary - Actors & Key Roles.....50
 - ▶ Visioning Workshop.....55
 - ▶ Secondary Research.....67
 - ▶ RBF & REACH.....69

Glossary

DSE	<u>Department of School Education</u>
SCERT	<u>State Council for Educational Research and Training</u>
NBSE	<u>Nagaland Board of Secondary Education</u>
NCERT	<u>National Council for Educational Research and Training</u>
UDISE	<u>Unified District Information System for Education</u>
SLEC	State Level Education Committee
DEO	District Education Officer
SDEO	Sub-Divisional Education Officer
JEO	Junior Education Officer
RBF	<u>Results Based Financing</u>
REACH	<u>Results in Education for All Children</u>

Introduction

The Government of Nagaland (GoN) launched the Nagaland: Enhancing Classroom Teaching and Resources (NECTAR) Project in early 2021 with support from the World Bank. The project supports the GoN's system-wide reforms agenda to enhance the capabilities of the state's education system for quality service delivery. This involves capacity development and system strengthening at various levels, establishment of outcomes-based information systems, and enhancement of technology-enabled platforms to support teaching and learning. In addition, the project also supports the preparation of a strategic quality improvement roadmap for all schools in Nagaland, as well as demonstrations of how to improve the teaching and learning environment in about 15 school complexes. Overall, the project is designed to mitigate some of the ongoing challenges in the state's education system, and develop an improved and more resilient system. A key initiative as part of technology enablement under the NECTAR project is to streamline distribution of school textbooks so that all students in public schools in Nagaland have on-time access to appropriate textbooks.

The government's focus on textbooks derives from extensive global evidence establishing the quality and availability of textbooks as one of the key drivers of learning outcomes in early grades. The research specifically highlights the criticality of the supply chain of textbooks, specifically procurement, distribution, storage and monitoring. The government kickstarted this initiative with a brief study to inform and ensure a focused reform process. Recognizing the significance of understanding and shaping the behavior of key stakeholders to create and sustain long-term change, the government focused this initial study on understanding the behavior of the various stakeholders connected with the textbook supply chain as well as uncovering the underlying motivations that drive those behaviors. For the same, it adopted a methodology inspired by Human Centered Design (HCD) approaches, which are designed to mine human behavior and systems for powerful insights, frame and facilitate collaboration across a wide range of stakeholders and entities towards richer solution generation, and drive a prototype-led and iterative process for problem solving which is critical to challenges in development.

The study started with a short two-week phase of field research, which was followed by a visioning workshop conducted in February and March of 2020. The field research, which involved structured interviews, focus group discussions (FGDs), and observation visits to various sites in the supply chain process, established a broad understanding of the current supply chain, mapped the stakeholders and identified key challenges and opportunities. Post this, participants that represented stakeholders in the supply chain were brought together in a workshop to reflect on the research findings, brainstorm some early solutions, and collaboratively outline a vision for change. This report summarizes the macro insights for the whole textbook supply chain, describes the processes in the current supply chain, presents several key lessons and opportunities for each stage, and makes several recommendations to reform the textbook supply chain. The report also highlights how HCD approaches can be utilized to solve development challenges.

The Team's Approach



In-Depth Interviews

Interviews were held with stakeholders from different stages of the supply chain. The lines of inquiry included processes involved, key tasks and activities, common hurdles and systemic factors.



Group Discussions

Activities and discussions were held with teachers and education officers to understand common issues through anecdotes, personal accounts, and available data from the distribution cycle.



Ethnography & Shadowing

Interviews and discussions were coupled with observations of key tools, processes, events, and spaces as relevant to the supply of textbooks.



Visioning Workshop

An immersive workshop environment was created for participants from the department - including officials and teachers involved with distribution - to reflect on the system and brainstorm solutions.

Field Research: 5 Schools | 2 Districts | 2 Education Offices | DSE HQ | SCERT HQ | 15+ Officers | 20+ Teachers
Workshop: 30+ Participants representing different actors in the supply chain

**SCERT
Textbook
Supply Chain**

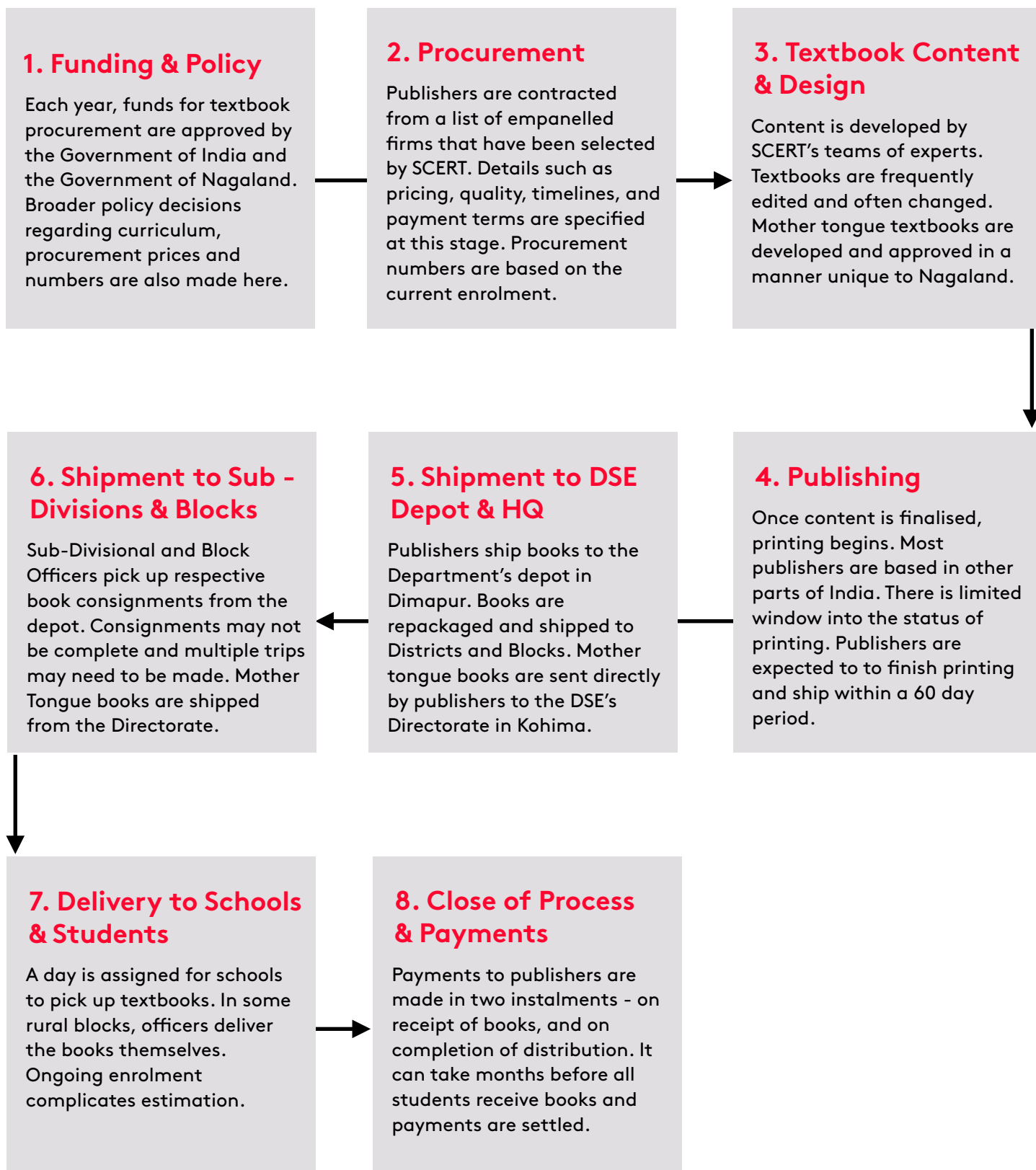


The focus of this document is on SCERT books distributed to elementary government schools free of cost through the official machinery. Elementary school is upto standard 8 and is the focus of SCERT.

The NBSE is responsible for curriculum and books for Secondary school - classes 9-12. NBSE textbooks are sold to students and schools through retailers who source from wholesalers and publishers. There is no involvement of the government in distributing NBSE textbooks and therefore they are outside the scope of the current project.

SCERT Textbook Supply Chain

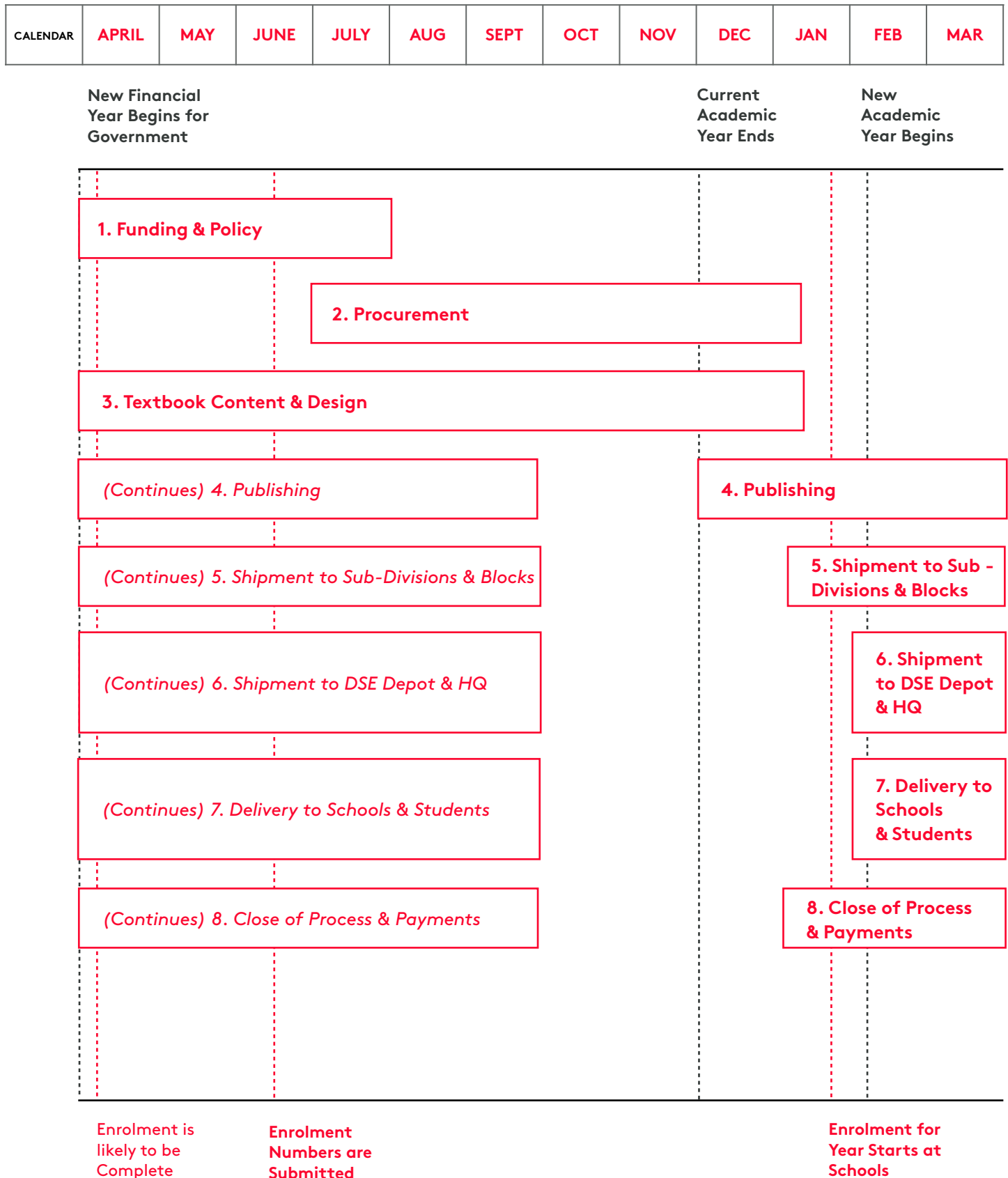
Key Stages



Note: This chain represents the current understanding and is expected to evolve further/become more nuanced with further research investments.

SCERT Textbook Supply Chain

Key Stages and Current Timelines



Note: This chain represents the current understanding and is expected to evolve further/become more nuanced with further research investments.

SCERT Textbook Supply Chain

Macro Learnings

Before we get into the learnings and opportunities at each stage, there are a few key macro/system wide learnings that have emerged from this phase of work.

Learning One

Enrolment figures are a challenge for estimating textbook demand. Authenticity, accuracy, consistency, stretched enrolment timelines, and lack of visibility into current enrolment are issues.

Learning Two

Technology use at the school, block, and sub-divisional level is limited. Communication relies on platforms like WhatsApp.

Learning Three

Frozen procurement rates, frequent changes in books, and delayed payments have limited publisher enthusiasm for participating in the process.

Learning Four

There is minimal real time visibility in terms of textbook distribution status at the different levels - district, sub-divisions, blocks, and schools.

Learning Five

Mother tongue textbooks are amongst the most delayed textbooks across classes. The dynamics that govern the production of these books is unique to Nagaland.

Learning Six

The textbook supply chain in Nagaland is also defined by many people going beyond the call of duty to get books to students on time.

SCERT Textbook Supply Chain

Macro Learnings

Learning One

Enrolment figures are a challenge for estimating textbook demand. Authenticity, accuracy, consistency, stretched enrolment timelines, and lack of visibility into current enrolment are issues.

Number of textbooks to be procured are based on the enrolment figures of the current year. For example - if there are 30 students in class 6 in a school this year, it is assumed that there will be 30 in class 7 next year and therefore 30 textbook sets will be needed. However, the actual enrolment in a school may be different - higher or lower - this creates a complexity that the current system struggles to handle. Variance from one academic year to another can be highly random - especially in rural schools.

Enrolment goes on through the year because of the Right to Education (RTE) act and further exacerbates the challenge that schools and officers have in predicting the eventual number of books needed. There is no dashboard that maintains a live enrolment status.

Schools maintain a list of enrolment figures on paper sheets that are collected in person by the DSE's sub-divisional and block level officers or are shared with them via WhatsApp. They are responsible for communicating these to DSE officers at the depot and placing orders. Officers share final enrolment numbers with MIS experts at the Sub-Divisional level in the May-June timeframe. The MIS officers digitise and upload data on the central data platform - UDISE. In this entire chain, there are likely to be mistakes made in entering data. Mistakes result in wrongly estimated number of books being ordered when the new procurement cycle kicks off.

A long standing problem in Nagaland has been inflated enrolment figures because of ghost schools and students. This is a problem that is being tackled strategically and a great amount of progress has been made. This problem means that the department may be ordering excess books without having a view into where this excess may be lying today.

Big Opportunity

Can enrolment be completed by the last week of November - first week of December to ensure that procurement numbers can be as accurate as possible?

SCERT Textbook Supply Chain

Macro Learnings

Learning Two

Technology use at the school, block, and sub-divisional level is limited. Communication relies on platforms like WhatsApp.

Nagaland as a frontier state in India suffers from weak mobile and internet connectivity. Even physical mail and courier services can be highly delayed in many remote districts.

Technology infrastructure at the school level is limited - especially in rural areas. This is true even for the DSE's offices in these areas. Most teachers and officers have limited experience working with specialised software. Most teachers and officers rarely use email. The DSE has appointed special MIS officers at the sub-divisional level who are expected to own some of the technology and data focused tasks - including updating the UDISE platform.

In this context, a platform like WhatsApp has emerged as the communication medium of choice - working even in low connectivity areas. A great amount of official communication happens now via the platform. Updates are provided, meetings organised, connections made, and discussions facilitated. Often, photographs of 'official documents' are circulated to save time and costs.

WhatsApp groups are created and 1:1 exchanges happen at multiple levels - DSE depot linking with sub-divisional and block officers, sub-divisional and block officers interacting with schools, and schools interacting with each other.

With so much of the interaction happening on WhatsApp, there is limited official trail of Digital communication. However, there is a great amount of trust that seems to keep the system going. Also users seem to have a great degree of comfort with the platform and the user experience it offers.

Big Opportunity

Can we use technologies and interfaces that reflect the preferences and behaviours of the people involved? Can a platform similar to WhatsApp function as a lean enterprise software?

SCERT Textbook Supply Chain

Macro Learnings

Learning Three

Frozen procurement rates, frequent changes in books, and delayed payments have limited publisher enthusiasm for participating in the process.

The funding for textbook procurement has been limited with procurement rates being held constant for almost a decade. The low rates have led to low publisher interest in participating in the process as input and transportation costs have risen substantially over the last 10 years. SCERT's relationships have been key to keeping prominent publishers engaged.

The low rates however have an impact on the quality of books procured. It is evident that to meet the cost guidance compromises on paper quality, printing etc. are made by publishers.

Low rates also mean that publishers may not always prioritise the printing of the SCERT textbooks. Additionally, publishers also seem hesitant to engage too deeply with the content design and layout process - they have limited patience with frequent and last minute changes to the textbooks.

There have been occasions when publishers have backed out as late as in December. These publishers have expressed their inability to supply books at prices negotiated by SCERT.

Procurement prices were revised last year with an almost 40% increase in the rates approved by the State Level Education Committee (SLEC). This has greatly eased the conversation with publishers and they seem a lot more willing to accommodate requests and prioritise Nagaland's orders.

Payments to publishers are meant to be settled ideally by March. However, because of the financial year ending and deliveries to schools still not completed, payments get delayed. It is not uncommon for settlements to take place in September. These delays have also been a reason for limited enthusiasm from publishers.

Big Opportunity

Can some publishers be made medium-long term partners in helping tackle the supply chain challenge?

SCERT Textbook Supply Chain

Macro Learnings

Learning Four

There is minimal real time visibility in terms of textbook distribution status at the different levels - district, sub-divisions, blocks, and schools.

Once the distribution of books kicks off, the records are maintained on paper and on excel sheets at different points in the chain. There is little or no visibility into the overall status of books having reached students.

Books are assigned to sub-divisions and blocks based on the enrolment numbers with the depot. These numbers are not based on live or actual enrolment as has been highlighted earlier - so there may be errors in number of books assigned.

Contracted labour is used to load books on the trucks. There are frequent mistakes in this process leading to excess or shortage in the books that are transported to the offices. Limited checks take place at the depot. Officers may count books only once they in the sub-divisions. Publishers also make mistakes in packing books - a standard 100 book carton may have lesser or more books that are only realised after physical counting takes place.

Schools are invited to pick books themselves in most cases. Mistakes are made during the pick up of books - more or less or wrong books being taken. There may be limited checks at the offices on busy days. Teachers realise mistakes once they count books in the schools. They also do not consistently maintain a dashboard of books that students may have received.

Through the chain, books are in excess or shortage at various points. The depot which is the nodal agency, does not have a real time sense of where these excesses and shortages lie. It depends on the initiative of schools, and block and sub-divisional offices to communicate status. Feedback on shortages is often immediately received but information on excess is less forthcoming - as excess books have to be returned back.

Big Opportunity

Can a dashboard be created that shows distribution status down to a student in the most remote school? Can this dashboard also help solve the enrolment problem?

SCERT Textbook Supply Chain

Macro Learnings

Learning Five

Mother tongue textbooks are amongst the most delayed textbooks across classes. The dynamics that govern the production of these books is unique to Nagaland.

Big Opportunity

Can we set an expectation that the Naga Heritage Textbooks are actually the first ones to reach schools as everything from content to production is handled by locals?

Nagaland is a state with multiple tribes and dialects. As part of the language and education policy, the state has decided to offer students the opportunity to learn in their mother tongues. To enable this, books for the Nagaland specific subject 'Naga Heritage Studies' are published in 18 different dialects for students in classes 1-8.

SCERT develops the basic content in English. Specially appointed Language Officers for each dialect are responsible for translation. A Literary Board has been appointed for each dialect to approve content and translations. Since this is a recently introduced system, and because the number of stakeholders involved are large - it can be inefficient. There is a lot of back and forth on the content and edits can be frequent. Handovers to publishers are often delayed.

The publishers for the Naga Heritage Textbooks are based in Nagaland. These are not large scale publishers and struggle with the scale and complexity of printing in a timely manner.

Nagaland Heritage Studies is also a subject in private schools. Students from these schools purchase the books from retailers. For publishers, there is some conflict of interest in terms of prioritising delivery to government schools versus making them available in the open market. However, there are two publishers for this reason as per SCERT.

Language officers are responsible for distribution of the Heritage books. That's a parallel system to the one for the distribution of other textbooks and creates some confusion and delay.

There could be students from different tribes in one school. This creates complexity in estimating books required. Availability of language teachers is limited and also makes estimation complex.

SCERT Textbook Supply Chain

Macro Learnings

Learning Six

The textbook supply chain in Nagaland is also defined by many people going beyond the call of duty to get books to students on time.

Across the supply chain, people face constraints. Processes and systems are not always clearly defined or standardised, technology and tools are limited, transportation and travel is not easy, budgets are limited, and there are people trying to game the system. In spite of these constraints, there are individuals and teams doing their best to get books to students on time.

The leadership in the DSE has led by example in the recent past. Timely distribution of books has been prioritised and the highest stakeholders in government have been made partners in the decision.

The textbook section - a small team of four - spends many weeks during the distribution cycle away often from their base in Kohima managing the distribution at the depot in Dimapur.

Block and sub-divisional officers make multiple trips to the Dimapur depot to pick up books. The budget for these trips is limited and often the officers have to pay out of their pockets to manage expenses for later deliveries.

In the cities and towns, school teachers frequently use their own vehicles and resources for picking up books. In rural areas, some officers take the initiative to distribute books to remote schools - spending their own money.

Big Opportunity

Can we recognise and reward exemplary attitudes and behaviours by government officials and schools involved in the supply chain?

SCERT Textbook Supply Chain

Stages, Actors, Learnings, and Opportunities

1. Funding & Policy

Key Actors

Government of India
Government of Nagaland
SLEC

Key Learnings

- Until recently, insufficient funding has been a challenge, further aggravated by inflated enrolment numbers. Leadership has approved a 40% increase in procurement budgets last year.
- Strong leadership has demonstrated that key activities (across stages) may be expedited purely through proactive supervision.

Key Opportunities

- How do we keep the leadership engaged and keep timely textbook delivery to schools at the top of the agenda?
- How does the state budget in a way that provides procurement the flexibility to work with the best publishers, procure books of the highest quality, and at numbers that account for sufficient buffer stocks?

2. Procurement

Key Actors

SCERT
DSE
Publishers

Key Learnings

- No formal tendering takes place right now. Empanelled publishers selected by SCERT are given preference. Longstanding relationships with publishers have allowed SCERT to negotiate low prices.
- Procurement is based on enrolment figures for current academic year.
- There may be errors in enrolment data collection. Data is collected manually from schools and then fed into a centralised data system by a MIS resource at the sub-divisional levels.
- Enrolment data based procurement does not account for high variance in enrolment numbers at the school, block, and district level. Neither does it account for buffer stock needed by schools.
- There are cases of intentional inflation of enrolment numbers by individuals in the system for various reasons - justified and fraudulent.

Key Opportunities

- How do we minimise errors in enrolment numbers?
- How do we plan for procurement that includes buffer stock? How can we account for variance in enrolment numbers?
- How do we institutionalise a formal tendering process for procurement?

For more detailed learnings, please refer to the appendix.

SCERT Textbook Supply Chain

Stages, Actors, Learnings, and Opportunities

3. Textbook Content & Design

Key Actors

SCERT
Language Officers
Literature Boards
Publishers

Key Learnings

- SCERT teams update content often. Sometimes it is the entire book, often the changes are edits.
- Multiple rounds of edits lead to inevitable delays, especially with local language books.
- Long standing relationships with publishers help in negotiating frequent changes in content. However, publishers have been increasingly reluctant as low procurement prices limit their ability to invest resources.

Key Opportunities

- How do we minimise the changes required to books every year?
- How do we create textbooks that are relevant for 3-4 years like NBSE?
- How do we create more efficient processes for content creation, finalisation, and handover to publishers?
- How do we create a sense of urgency and priority amongst stakeholders?
- How do we ensure that handover of content happens latest by September-October?

4. Publishing

Key Actors

DSE
SCERT
Language Officers
Literature Boards
Publishers

Key Learnings

- Publishers are given two months to print and ship books once content is handed over to them. There is no dashboard to view printing status at any point during these two months.
- The long winter break in Nagaland in Dec-Jan is a reason why content handover is delayed and follow ups with publishers are infrequent.
- In this current procurement cycle, monitoring was of a slightly higher intensity and it helped accelerate the printing process.

Key Opportunities

- How do we create greater visibility into printing status?
- How do we encourage publishers to shorten the printing period?
- How do we monitor quality in a proactive transparent manner?
- How do we condense the period of 60 days given to publishers for printing?
- How do ensure that even during the winter break momentum is not lost?

For more detailed learnings, please refer to the appendix.

SCERT Textbook Supply Chain

Stages, Actors, Learnings, and Opportunities

5. Shipment to DSE Depot & HQ

Key Actors

Publishers
Shippers & Transporters
DSE Depot Officers
DSE

Key Learnings

- Publishers are responsible for transportation of books. Most books are transported by road - sometimes trains are used.
- Books are received by the DSE at their depot in Dimapur. Mother Tongue Textbooks are sent also to the DSE Directorate/HQ in Kohima.
- Books are packaged in standard boxes with 100/50 books inside. But there may be discrepancy in the number of actual books. Books are not physically counted upon receipt at depot.
- There is minimal DSE staff at depot managing a large scale operation. Contractual labour is employed for the 2-3 month period of distribution.

Key Opportunities

- How do we minimise shipping time and costs from publisher to depot?
- How do we minimise errors in shipments at the unit package level?
- How can books be counted upon receipt?
- How do we make the storage of books more efficient?

6. Shipment to Sub-Divisions & Blocks

Key Actors

DSE Depot Officers
SDEO & Block Offices
Language Officers
DSE

Key Learnings

- Sub-divisional and block officers from across Nagaland are responsible for picking up books on behalf of schools in their areas.
- Officers make multiple trips for books as they arrive in a staggered manner. Limited budgets for trips create inconvenience for officers.
- The officers and labour at the depot organise consignments for the sub-divisions and blocks. There are often mistakes in organising the loads.
- There may also be discrepancies in the enrolment figures with the depot and those with the sub-divisional and block officers.

Key Opportunities

- How do we minimise the trips that officers need to make to the depot?
- How do we relook at the idea of a single centralised depot in Dimapur?
- How do we minimise the errors in loading of books at the depot?
- How do we ensure consistent numbers between the depot and offices?
- How do we minimise the out of pocket expenses for officers who have come to Dimapur for pick ups?

For more detailed learnings, please refer to the appendix.

SCERT Textbook Supply Chain

Stages, Actors, Learnings, and Opportunities

7. Delivery to Schools & Students

Key Actors

DSE Depot
DSE
Government Schools

Key Learnings

- Schools pick up books from sub-divisional and block offices. In some rural areas, officers make the effort of delivering books to schools.
- Teachers and students pick up books on behalf of schools. Often they use their personal transportation for these trips.
- Since multiple schools pick up books together, it can be chaotic at times.
- Schools are unsure of the actual number of books they need as enrolment is ongoing and final numbers are uncertain.
- Schools and teachers informally coordinate amongst themselves in case of shortages and excess.

Key Opportunities

- How might we match the books that schools can take to their actual requirements and live enrolment figures?
- How might we make delivery to schools efficient and effective?
- How do we minimise the out of pocket expenses for teachers?
- How do we encourage more coordination between schools?
- How do we get at least teacher copies to schools by December-January?

8. Close of Process & Payments

Key Actors

SDEO & Block Offices
Government Schools
DSE Depot
DSE

Key Learnings

- In case of shortages, DSE reorders books in smaller batches from the publishers. The same process as earlier is followed for disbursement.
- The final payments to publishers are often made as late as September.
- There have been occasions when books have not reached the schools and students through the course of the entire academic year.
- It is possible that some schools and divisions carry excess stock but these books are never returned to the depot.

Key Opportunities

- How do we make collection and redistribution of excess stock efficient?
- How do we ensure timely payments are made to the publishers?
- How do we keep the system informed if even a single student is left without a textbook?
- How do we maintain a bank of books that can be used in case students spoil or lose their books?

For more detailed learnings, please refer to the appendix.

Conclusion & Next Steps

There are multiple challenges facing the Textbook supply chain in Nagaland but also a number of evident opportunities before the state to explore. The effort is just the start of the effort. In terms of next steps, a few guiding principles that can be looked at include -

Deeper User Understanding

While the inception research has covered a lot of ground, a much more extensive research effort needs to be carried out to understand challenges from the different districts, document practices and tools in use, and identify potential opportunities for change.

Design for Systems and Behaviours

While there is a need to solution for the core supply chain challenges, there is a need to create these solutions in a manner that reflects stakeholder knowledge, attitudes, and behaviours. This is essential for ensuring adoption and sustainability.

Results Based Financing

As the guiding framework for this project, RBF will be an interesting lens to look at interventions. We know now that a range of motivations and interests are involved in the supply chain and RBF will be highly relevant in driving actors towards desirable actions and results.

Multi-Disciplinary Team

As an extension of the points above, there is a need for a multi-disciplinary team that combines research, strategy, supply chain, technology, design and prototyping, and stakeholder management skills - and can analyse needs and conceptualise solutions to approach the challenge from a holistic perspective.

Iterative Solution Approach

One size fits all solutions are likely to have limited chance of success. It is important that solutions are built iteratively - responding to divergences in geographical context, technology adoption, stakeholder motivation, and scale.

The initial ideas identified in the workshop should be used as probes to research with stakeholders - this is to judge desirability (are they valuable) of these solutions, their feasibility (how can they be done), and viability (can they be done with limited funds and resources).

Co-Creative Approach

It is important that we provide actors a sense of real ownership and purpose, and that they are involved through the design process. A co-creative, participative approach will be critical in bringing stakeholders together and creating a real sense of joint ownership and urgency.

APPENDIX



Detailed Supply Chain Overview

Key Learnings by Stage

How to Read this Section

The supply chain has been divided in to 8 stages. Each stage comprises 3 sections:

Key Learnings

The main findings for the stage based on the research and visioning workshop

Actors Involved

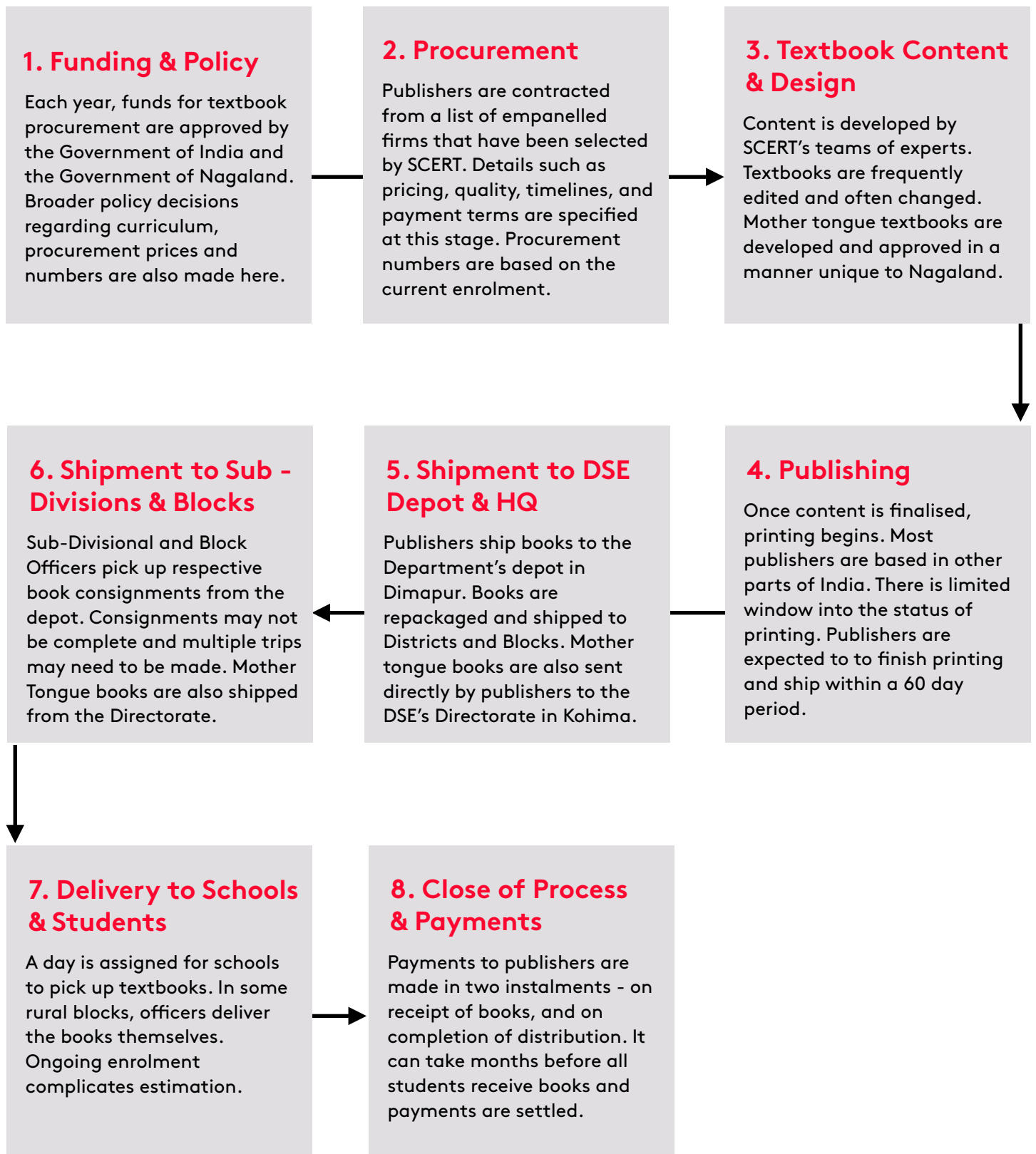
The key actors involved in the concerned stage, their respective locations and corresponding roles

Systems, Tools, and Technology Used

The different frameworks – digital, abstract, or physical – that aid the workflow of the given stage

SCERT Textbook Supply Chain

Key Stages



Note: This chain represents the current understanding and is expected to evolve further/become more nuanced with further research investments.

SCERT Textbook Supply Chain | Stage One

Funding & Policy

Key Learnings

Availability of Funds

- There has been limited availability of funds available for procurement over the past few years
- Fund situation has improved as enrolment data has been cleaned up
- The government approved almost a 40% increase in procurement budgets for this year

Move to NCERT Textbooks

- A decision to move Class 6,7, and 8 textbooks to NCERT texts was made last year in order to stabilise content and improve quality based on recommendation of SCERT

Leadership Support

- Overall, the leadership has prioritised education and made timely textbook delivery to students a critical area of focus
- A team was sent to Delhi to monitor the printing process in Delhi this year, which proved to be an effective move

Multiple Academic Calendars

- The CBSE academic year differs in its start and end dates than the NSBE year, leading to the need for independent planning for each

Unmet Needs Beyond Textbooks

- Especially in more interior regions, there is a need for incentive for students beyond textbooks — basic stationery and notebooks were some of the things identified



SCERT Textbook Supply Chain | Stage One

Funding & Policy



Actors Involved - Location and Key Roles

Government of India | New Delhi

- Allocating funds for procurement under Samagra Shiksha Programme

Government of Nagaland/SLEC | Kohima

- Allocating funds for procurement under Samagra Shiksha Programme
- Deciding on shifts of textbooks from one education board to another

Systems, Tools, and Technology Used

Formal Frameworks, Systems & Platforms

- Samagra Shiksha Programme
- Government of Nagaland Budget
- National Curriculum Framework (NCF)

Communication Channels & Tools

- Email
- Phone Calls
- WhatsApp
- Official Paper Trail
- In Person Meetings

SCERT Textbook Supply Chain | Stage Two

Procurement

Key Learnings

Choice of Publishers

- SCERT and DSE have a preference for working with MNC publishers for quality control
- Long trusted relationships with publishers have been critical in them accommodating low procurement prices for so many years
- Limited tendering leads to the consistency in the list of empaneled publishers
- For mother tongue language books, it was recommended that local publishers be chosen
- There have also been instances when publishers have backed out at the last minute, leading to a repetition in the procurement process

Pricing and Procurement

- Procurement prices for elementary textbooks have been low almost for 15 years
- Publishers, especially new ones have been hesitant to publish at such low prices
- Long-term publishers have been highly accommodative but their patience was running low
- Some publishers have backed out at the last minute because of inability to meet costs
- Publishers have reacted positively to hike in procurement prices this year and are more responsive

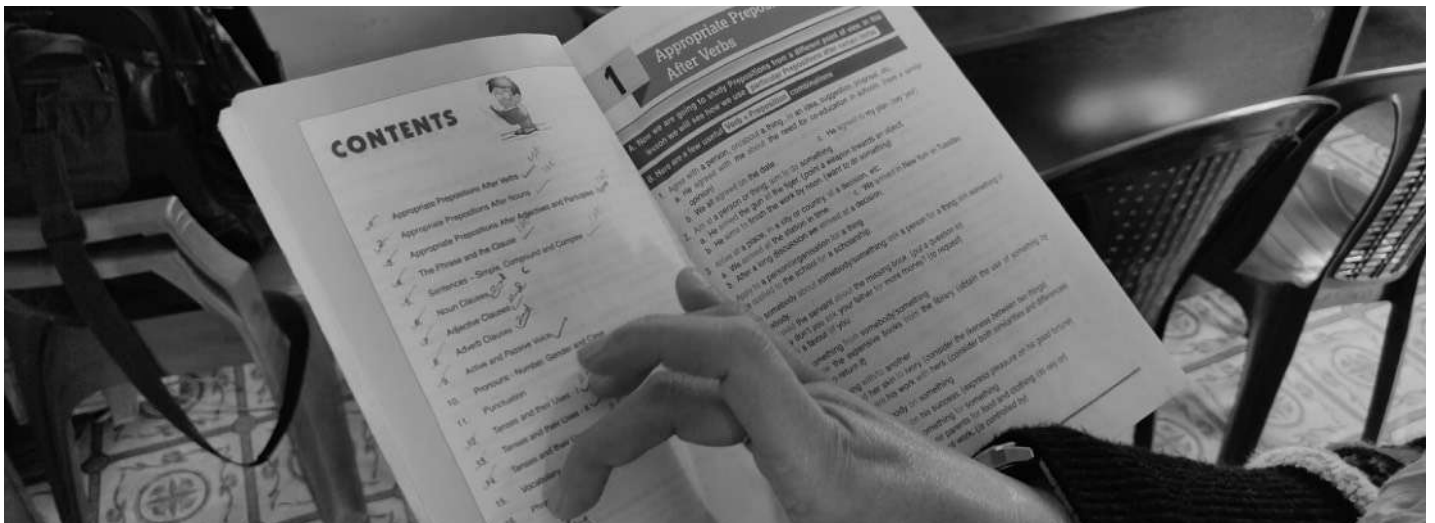
Demand Estimation

- Enrolment figures are sometimes inflated because of both genuine error and malpractice on ground
- There is a rolling enrolment at schools because of RTE - even after formal admission windows close. This makes accurate estimation of final enrolment figures a real challenge for Schools



SCERT Textbook Supply Chain | Stage Two

Procurement



Actors Involved - Location and Key Roles

SCERT | Kohima

- Defining minimum production quality levels of textbooks
- Negotiating procurement prices for minimum quality levels with publishers
- Identifying and empaneling potential publishers
- Maintaining relationships with long-term trusted publishers
- Assisting in review of tender respondents and negotiation of prices
- Suggesting alternatives in case selected publishers back out

DSE | Kohima

- Estimating order size based on previous year's enrolment figures
- Coordinating with shortlisted publishers identified by SCERT
- Approving procurement prices identified by SCERT and publishers
- Finalising contracts with publishers and placing orders
- Coordinating with alternatives in case selected publishers back out

SCERT Publishers | Nagaland, Rest of India

- Participating in selection process
- Negotiating procurement prices and terms with SCERT and DSE

Systems, Tools, and Technology Used

Formal Frameworks, Systems & Platforms

- Samagra Shiksha Programme
- Government of Nagaland Budget
- National Curriculum Framework (NCF)

Communication Channels & Tools

- Email
- Phone Calls
- WhatsApp
- Official Paper Trail
- In Person Meetings

SCERT Textbook Supply Chain | Stage Three

Textbook Content & Design

Key Learnings

Frequent Updation of SCERT Content

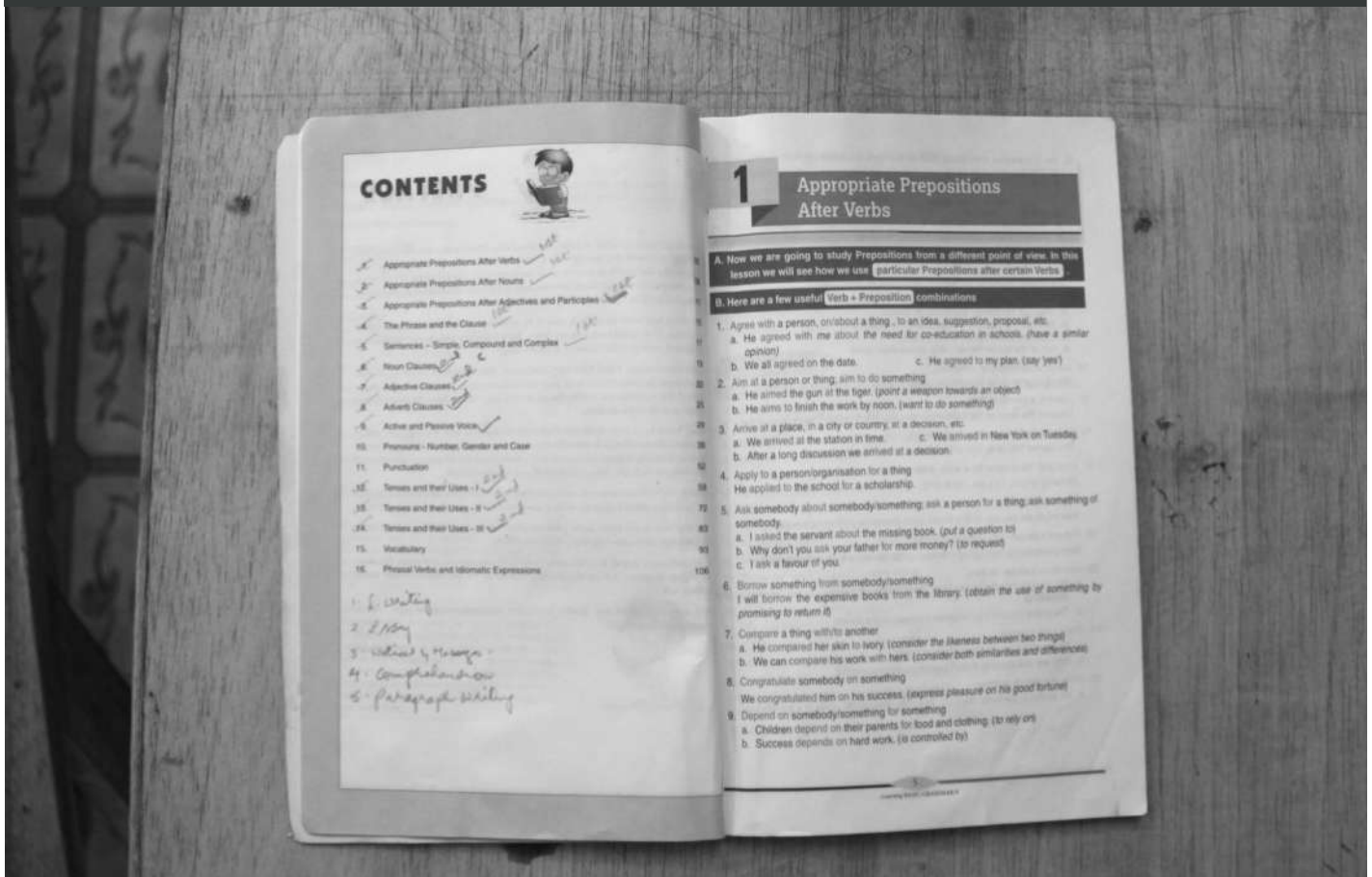
- SCERT books are frequently updated - big and small changes are made almost each year
- NBSE books in contrast are only changed once in three years
- The frequent changes creates delay in handing over finalised content to publishers
- Publishers push back against making frequent changes as it affects their costs and causes delays
- Different revision cycles across subjects is one of the factors that complicates the ordering process. It also causes delays on the changed books and leads to overall staggered receipt and disbursal

Challenge with Mother Tongue Textbooks

- SCERT works with Language Officers for almost 18 dialects. These Officers are responsible for translating content written in English to the dialects Literature Boards approve final content for these subjects
- Working with such a large number of Officers and Boards is a challenge for the SCERT. Deadlines are frequently missed by the extended team
- The process of translation and proof reading of content for these textbooks can be tedious

Late Handover to Publishers

- While the whole process of content and layout finalisation and handover to publisher should ideally be completed by late November, there have been times when this process has extended into mid January



SCERT Textbook Supply Chain | Stage Three

Textbook Content & Design



Actors Involved - Location and Key Roles

SCERT | Kohima

- Deciding textbook content for coming academic year
- Updating content and design elements for current textbooks
- Creating content and design elements for new textbooks
- Coordinating with language experts for mother tongue based textbooks
- Coordinating with village councils for mother tongue based textbooks
- Proof reading and design approval

Language Officers | Nagaland

- Translating content for mother tongue subjects
- Editing and updating content for current textbooks
- Creating content for new textbooks

Literature Boards | Nagaland

- Approving content for mother tongue subjects

SCERT Publishers | Nagaland, Rest of India

- Updating content and design elements for current textbooks as per SCERT
- Creating content and design elements for new textbooks as per SCERT

Systems, Tools, and Technology Used

Communication Channels & Tools

- Email
- Phone Calls
- WhatsApp
- Official Paper Trail
- In Person Meetings

Formal Frameworks, Systems & Platforms

- National Curriculum Framework (NCF)

Other Tools

- Design and editing tools

SCERT Textbook Supply Chain | Stage Four

Publishing

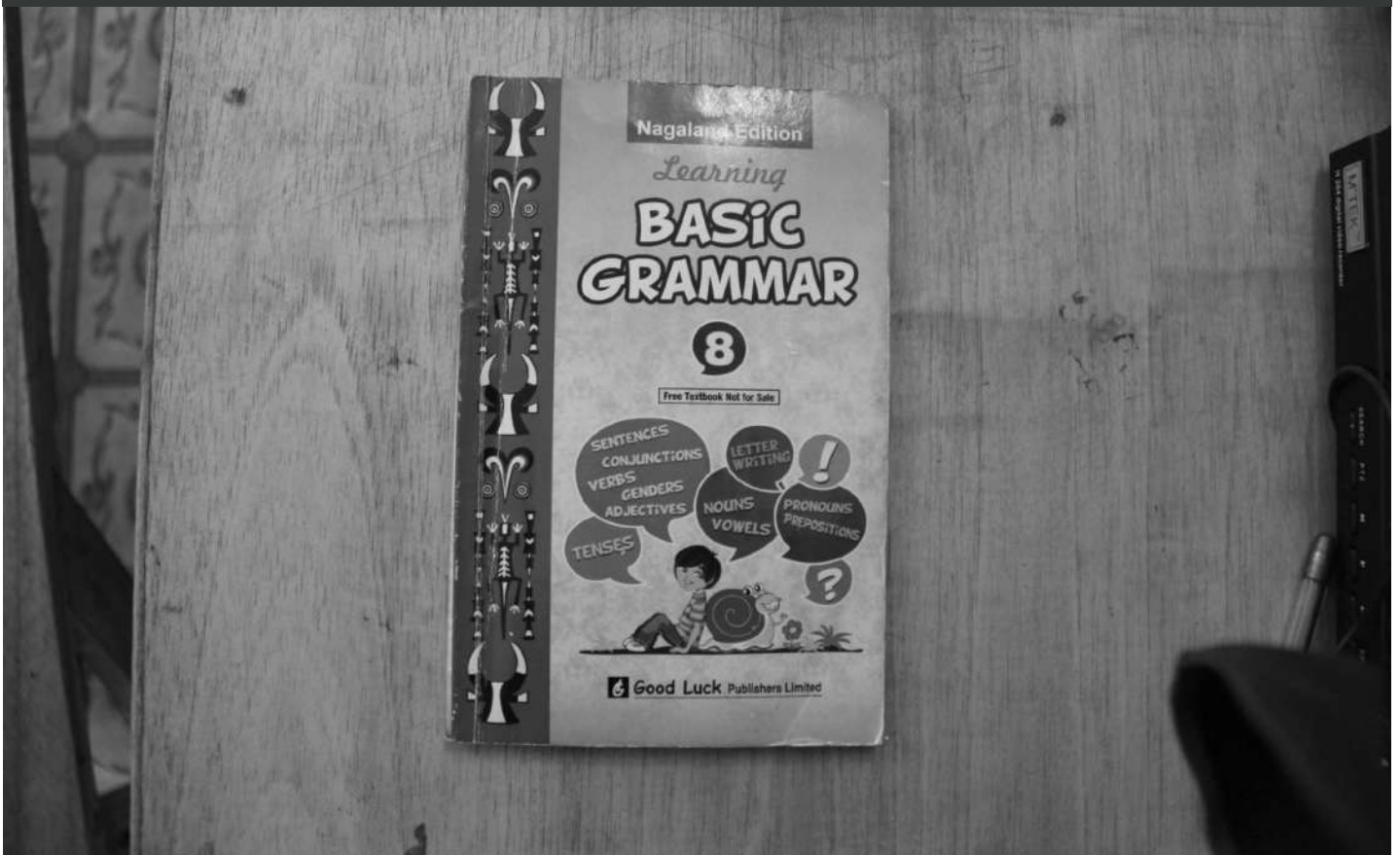
Key Learnings

Gaps in Protocol & Processes

- The roles and responsibilities when it comes to quality control are unclear. No training is provided
- There have been occasions when the samples received by SCERT and DSE are of a higher quality than the eventually published books
- SCERT and DSE have limited capacity to do quality audits at source and therefore have little window into the printing process
- There is no single dashboard to view printing progress

Holiday Window in Nagaland

- From mid December to mid January, there is limited activity at the offices here in Nagaland - that means there is also limited capacity to frequently follow up with publishers during this period



SCERT Textbook Supply Chain | Stage Four

Publishing



Actors Involved - Location and Key Roles

SCERT | Kohima

- Proof reading content and reviewing design of samples - digital and paper
- Coordinating with Language Officers and Literature Boards for mother tongue books
- Approving final version of textbooks for print
- Quality control during publishing
- Assisting in negotiation with publishers in terms of timeline for completion

Language Officers | Nagaland

- Proof reading content for mother tongue subject books

Literature Boards | Nagaland

- Approving content for mother tongue subject books

Publishers | Nagaland, Rest of India

- Creating and shipping digital and paper samples to SCERT for review
- Responding to edits suggested based on proof reading and design reviews
- Printing textbooks as per quantity and quality standards ordered by DSE
- Completing textbook printing within identified timeline

DSE | Kohima

- Ensuring printing of textbooks at publishers begins on time
- Maintaining an estimate of completion of printing

SCERT Textbook Supply Chain | Stage Four

Publishing

Systems, Tools, and Technology Used

Communication Channels & Tools

- Email
- Phone Calls
- WhatsApp
- Official Paper Trail
- Informal Paper Trail
- In Person Meetings

Formal Frameworks, Systems & Platforms

- Approved Curriculum by SCERT, NCERT, NBSE

Other Tools

- Design and editing tools
- Printing and assembly equipment

SCERT Textbook Supply Chain | Stage Five

Shipment to DSE Depot & HQ

Key Learnings

Books Arrive by Road to Dimapur

- The publishers are responsible for shipping books from their printing centres to the Dimapur Depot
- Majority of the transportation seems to be via road but rail is also used on some occasions

Limited Ability of DSE Dimapur to Tally Books Received vis-a-vis Order

- Books come pre-packaged in sacks and boxes and there is limited ability of the DSE staff to tally actual books received

Labour Coordination

- Most of the labour at the depot cannot speak Nagamese, making communication & coordination difficult
- Labour shortages also mean the lack of capacity to implement any quality control measures

Delay of Mother Tongue Textbooks

- Over the past 2-3 years including this one, the Mother Tongue Textbooks are amongst the most delayed in arriving at the Depot or the Kohima DSE HQ



SCERT Textbook Supply Chain | Stage Five

Shipment to DSE Depot & HQ



Actors Involved - Location and Key Roles

Publishers | Nagaland, Rest of India

- Shipping textbooks to DSE's Dimapur depot by either road or rail
- Shipping batches of mother tongue textbooks directly to DSE Kohima
- Shipping textbooks in batches or in full quantity as per convenience
- Completing textbook delivery at DSE Dimapur depot within identified timeline

Shippers and Transporters | Nagaland, Rest of India

- Packaging and transporting books from publisher printing centres to Depot
- Ensuring delivery of shipped textbooks at Depot

DSE Depot | Dimapur

- Ensuring shipping of textbooks at publishers begins and completes on time
- Receiving textbooks shipped by individual publishers and confirming quantity
- Organising textbooks as per classes and subjects

DSE | Kohima

- Coordinating with publishers on delivery of books at Dimapur depot
- Coordinating with publishers on delivery of mother tongue books at DSE Kohima
- Confirming quantity delivered at depot based on publisher shipment details

Systems, Tools, and Technology Used

Communication Channels & Tools

- Email
- Phone Calls
- WhatsApp
- Official Paper Trail
- Informal Paper Trail
- In Person Meetings

Other Tools

- Packaging material for books
- Railways and trucks
- Depot space for storage

SCERT Textbook Supply Chain | Stage Six

Shipment to Sub-Divisions & Blocks

Key Learnings

Multiple Trips to Depot

- It is rare for all books to arrive at one go - SDEO and Block Officers make multiple trips to Dimapur. Even though this year books have arrived relatively faster, some Officers have had to make more trips to Dimapur than last year

Discrepancy Between Enrolment and Order Figures

- The DSE Depot may face occasions where the enrolment figures and the order figures for SDEO and Block Offices do not match

Loading Challenges

- The DSE Depot in Dimapur arranges transport and labour for many SDEO and Block Offices - books to be shipped are often loaded before the Officers arrive
- The signage on the packaging is not always clear and mistakes happen at the time of loading - books are loaded in smaller numbers than expected or they could also be in excess
- The SDEO and Block Officers have limited chance to tally actual books vis a vis their enrolment or order numbers

Transportation and Financial Challenges

- Many districts and towns are remote and transportation times and costs are extremely high
- SDEO and Block Offices have limited budgets for transportation of books - multiple trips means exceeding budgets
- When budgets are exceeded, SDEO and Block Officers end up pooling personal resources to pay for transportation

2018 STUDENT ENROLMENT UNDER SDEO CHOZUBA

School / SDEO	Name of School	Class A		Class B		Class 1		Class 2		Class 3		Class 4		JRI	TOTAL	Class 5	Class 6	Class 7	Class 8	TOTAL	Total	TOTAL							
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls																
1	13080402301 GHS CHOZUBA													0	0	0	0	0	0	0	0	0							
2	13080401801 GHS DULHA													0	0	0	0	0	0	0	0	0							
3	13080401501 GHS PHUJI 173	12	15	15	16	11	15	12	14	15	11	17	10	81	81	10	13	11	19	12	15	10	41	100					
4	13080401102 GHS YORUBA													0	0	0	0	0	0	0	0	0	0	0					
5	13080401601 GHS YAPAN RIBA													0	0	0	0	0	0	0	0	0	0	0					
6	13080400801 GHS THUVOPSI													0	0	0	0	0	0	0	0	0	0	0					
7	13080401701 GHS CHESEZU													0	0	0	0	0	0	0	0	0	0	0					
8	13080402101 GHS CHETHERA													0	0	0	0	0	0	0	0	0	0	0					
9	13080402006 GHS KHULAZU BASA													0	0	0	0	0	0	0	0	0	0	0					
10	13080401205 GHS THIPUZI													0	0	0	0	0	0	0	0	0	0	0					
11	13080402102 GHS CHETHERA													0	0	0	0	0	0	0	0	0	0	0					
12	13080401402 GMS RUNGUZU NASA 46	5	4	7	8	8	9	8	6	5	6	7	6	41	41	84	14	13	10	11	12	9	39	133					
13	13080402001 GMS RUNGUZU OLD													0	0	0	0	0	0	0	0	0	0	0					
14	13080401604 GMS CHOZUBA VILLAGE 110	6	5	8	7	9	6	9	8	6	2	7	4	41	41	32	77	8	7	3	3	4	5	23	101	41			
15	13080401302 GMS CHOZUBA TOWN 141	10	7	8	9	9	7	5	9	8	6	9	6	49	49	8	10	9	12	8	11	8	6	31	79	72	141		
16	13080401101 GMS YORUBA	10	9	8	9	8	6	7	9	5	9	9	8	47	47	10	97	9	9	10	10	9	8	10	5	31	71	167	
17	13080401001 GMS RUAZHO													0	0	0	0	0	0	0	0	0	0	0	0				
18	13080400703 GMS SUTHOZU OLD 9	6	5	6	8	6	8	9	5	5	8	10	8	43	43	10	8	12	10	9	7	1	33	77	58	28	9		
19	13080400601 GMS SEKRUZU													0	0	0	0	0	0	0	0	0	0	0	0				
20	13080401901 GMS KHULAZU BAWE	8	9	5	7	8	8	9	7	8	5	9	8	47	47	14	91	6	7	5	9	6	10	11	6	28	12	60	131
21	13080400901 GMS THENYIZU	6	4	3	6	3	4	5	4	4	3	5	2	23	23	13	47												43
22	13080401202 GMS THIPUZI	5	4	6	4	6	4	4	5	5	4	3	2	23	23	15	55												54
23	13080401206 GMS RIHUBA 54	9	8	4	8	9	8	8	4	5	7	8	4	41	41	11	83												40
24	13080401903 GMS KHULAZU BAWE 40	9	8	4	8	9	8	8	4	5	7	8	4	41	41	11	83												40
25	13080402301 GMS PHUYOBA	8	7	5	5	7	5	4	5	6	4	6	8	43	43	42	85												85
26	13080402003 GMS KHULAZU BASA 'A'	5	8	9	8	9	9	8	5	6	8	6	4	41	41	42	83												83
27	13080402005 GMS KHULAZU BASA 'B'	7	6	5	6	8	5	4	5	4	5	8	4	34	34	11	67												67
28	13080401702 GMS CHESEZU BAWE 20	6	9	5	5	8	9	4	5	6	9	8	4	37	37	41	78												78
29	13080401703 GMS CHESEZU BASA 49	9	7	9	8	9	8	5	5	9	8	8	6	43	43	44	90												90
30	13080401705 GMS CHESEZU NASA 14	9	4	9	7	8	6	9	6	7	10	4	11	36	36	44	90												90
31	13080400805 GMS VEIHUBA 24	6	8	7	5	6	5	6	7	5	3	1	8	5	31	13	71												71
32	13080400802 GMS THUVOPSI 'A' 59	6	8	5	6	8	7	5	3	4	4	5	4	33	33	32	65												65
33	13080400804 GMS THUVOPSI 'B' 32	5	6	4	8	4	6	5	4	8	5	4	8	27	27	19	66												66
34	13080400201 GMS RUNGUZU OLD	9	8	6	8	6	4	6	8	7	5	8	6	41	41	39	81												81
35	13080401606 GMS CHOZU NASA	10	8	8	9	8	6	9	8	6	9	7	4	49	49	40	89												89
36	13080400401 GMS KHUSOMI 32	6	9	9	5	9	5	8	9	8	5	9	7	49	49	40	89												89

SCERT Textbook Supply Chain | Stage Six

Shipment to Sub-Divisions & Blocks

Key Learnings

Discrepancy between Received Books and Enrolment and Order Figures

- The SDEO and Block Offices only know the actual quantity of books received once they are unpacked and stacked
- While the sacks and boxes are supposed to have a standard number of books, there could be discrepancies

Limited Documented Communication

- Communication between Depot and SDEO and Block Offices happens over calls and WhatsApp with a limited official trail



SCERT Textbook Supply Chain | Stage Six

Shipment to Sub-Divisions & Blocks



Actors Involved - Location and Key Roles

DSE Depot | Dimapur

- Intimating sub-divisional offices that textbooks have arrived at depot
- Scheduling of pick up date with relevant SDEO or Block Officers
- Organising textbooks as per enrolment numbers of sub divisions and blocks
- Organising transportation for textbooks to SDEO or Block Offices
- Organising labour to load textbooks on transport vehicle on pick up date
- Approving payments for transport as per SDEO or Block level budget
- Handing over pre-approved local distribution budgets to receiving Officers
- Confirming loaded quantities with officers as per enrolment/order sheet
- Communicating potential receipt dates for books in shortage or not received yet

SDEO and Block Offices | Nagaland

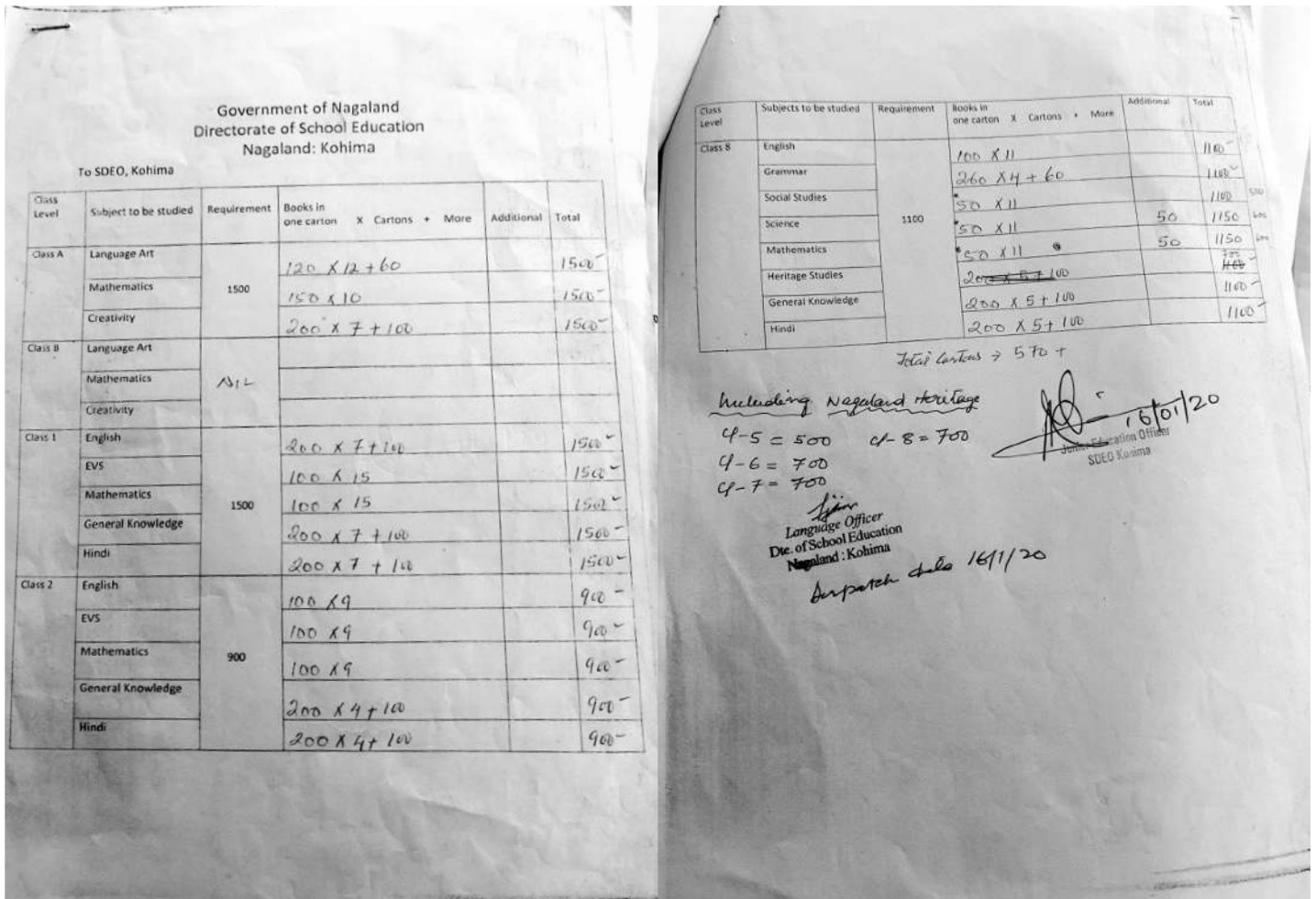
- Communicating status of textbook receipt to Schools
- Scheduling pick up date with DSE Dimapur Depot officials
- Identifying officers and staff to go to Dimapur Depot for pick up
- Confirming loaded quantities with officers as per enrolment/order sheet
- Receiving pre-approved local distribution budgets to officers
- Estimating potential receipt dates for books in shortage or missing completely
- Discussing potential receipt dates for books in shortage or not received yet

DSE | Kohima

- Coordinating communication Dimapur Depot and SDEO or Block Offices
- Coordinating with publishers on delivery of books in shortage or not received yet
- Addressing concerns raised by SDEO or Block Officers
- Coordinating with sub-divisions on pick up of mother tongue books in Kohima

SCERT Textbook Supply Chain | Stage Six

Shipment to Sub-Divisions & Blocks



Systems, Tools, and Technology Used

Communication Channels & Tools

- Email
- Phone Calls
- WhatsApp
- Official Paper Trail
- Informal Paper Trail
- In Person Meetings

Other Tools

- Packaging material for books
- Trucks
- Storage for books at SDEO and Block Offices

SCERT Textbook Supply Chain | Stage Seven

Delivery to Schools & Students

Key Learnings

Limited Documented Communication

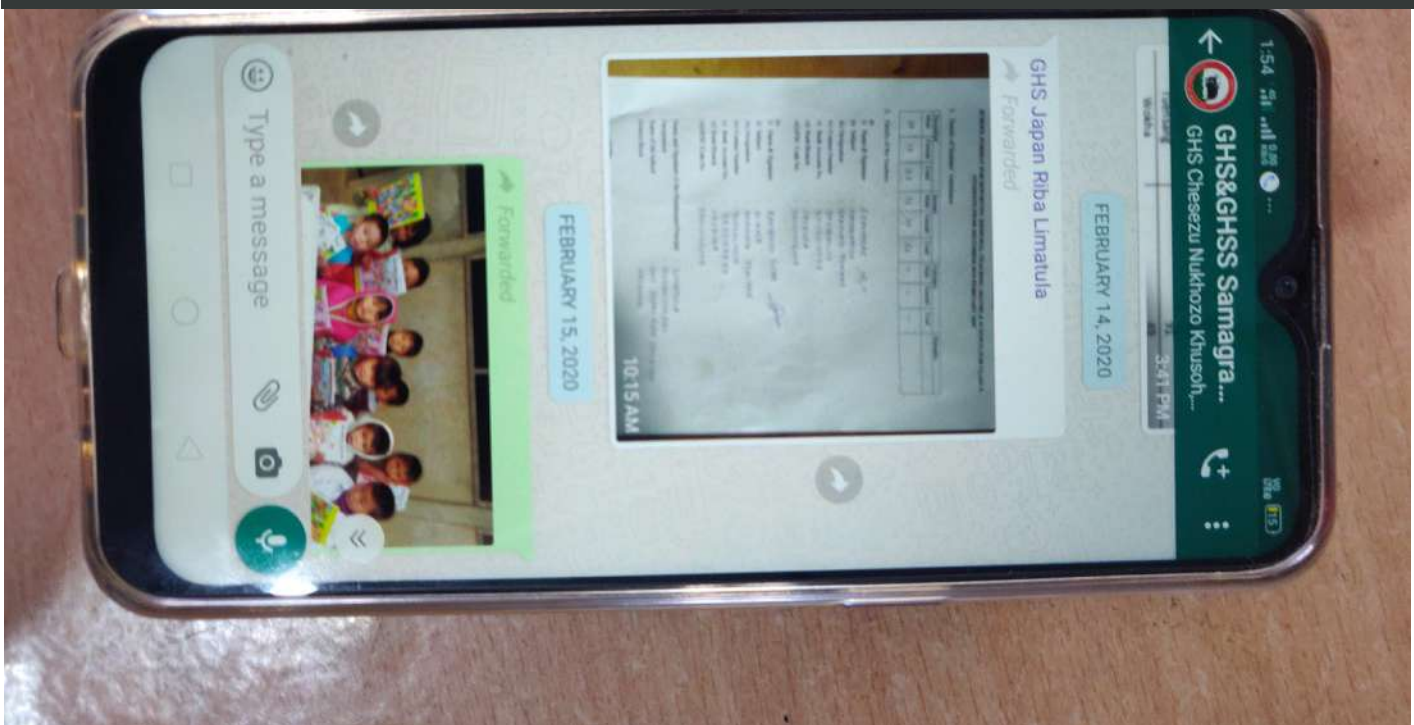
- Communication between SDEO and Block Offices and Schools happens over calls and WhatsApp with a limited official trail

Coping with Delay and Shortage

- There is no avenue to cross-check the discrepancy between books received and actual enrolment
- Schools cope with delay and shortage of books through a number of methods - sourcing old books from students who have moved to the higher grade, creating book banks, using teacher copies, requesting two Students to share a book during class etc.
- Teachers and Heads are part of formal and informal WhatsApp groups - incase some schools have books in excess - they would coordinate with those schools who are facing shortages
- In many government schools, wards are being educated by families who they help with household work - these families may put limited pressure on schools to ensure textbooks are distributed on time
- In cases of block-level shortage, additional books are first given to the schools that have not received any yet, and not to those schools that have insufficient quantities
- Delivery to schools is not standardised, and remains dependent on personal initiative

First Come First Served

- All schools under a SDEO or Block Office are invited to pick up books on the same day. This is done to ensure a fair chance for Schools to pick the books they need
- Books are stacked on the ground, usually by class, but sometimes randomly - it create great confusion
- With multiple Schools competing to pick up books, there are occasions when it can feel very chaotic
- Having experienced the race for books a few times, schools have developed strategies - taking more people, creating human chains from book stack to their vehicles, Teachers picking books and Students running to place them in the vehicles etc.
- Teachers however do value running into old colleagues and friends on these collection days



SCERT Textbook Supply Chain | Stage Seven

Delivery to Schools & Students

Key Learnings

Inconvenience for Schools to Pick Up Books

- It is rare for all books to arrive at one go. Schools make multiple trips to SDEO or Block Offices
- The offices can often be a long distance from Schools and trips can be highly inconvenient
- Teachers and students are deputed from to pick up books - they often end up missing classes
- The pick up of books is often postponed by schools to be done along with mid-day meal supplies
- It is hard for schools in interior regions to time their collection. They often face shortages because schools close to offices get to the schools first.

Transportation and Financial Challenges

- Schools hire vehicles or Teachers use their own personal vehicles for the textbook pick up
- There is no or limited budget assigned for pick ups - Schools end up using funds meant for other uses
- Teachers also often end up using personal money to fund the transportation costs
- In rural areas, Schools and Teachers have limited funds to pay for transportation which can be quite high
- In rural areas, SDEO and Block Officers can end up spending their own vehicles and money for distribution of books to remote schools

Dynamic Enrolment and Difficulty of Predicting Need

- The enrolment process at schools can continue well into March - this makes it extremely difficult for Schools and Officers to predict the exact number of books they will eventually need
- Parents delay enrolment because of cold weather, in some districts because of crop cycles, lack of awareness etc.
- There is no formal process for accelerating or encouraging early enrolment at schools

Excess Books at Schools

- Schools express the need to have a few extra copies of each textbook to use as the teacher's copy, to use in case a student forgets to bring their copy to school, or loses or damages it
- Schools often do pick up extra copies of books — they negotiate with Officers to let them have 1-2 extra copies. When there is no tight supervision, they may take slightly more than that
- Schools also like to carry excess books because they are unsure of final enrolment numbers

Storage Challenges

- There is no dedicated storage facility at the school-level, which often leads to improvisation

SCERT Textbook Supply Chain | Stage Seven

Delivery to Schools & Students



Actors Involved - Location and Key Roles

SDEO and Block Offices | Nagaland

- Unpacking of textbooks received from DSE
- Tallying quantity received with shipment sheet and enrolment numbers
- Informing DSE Depot in case of shortage, excess or error in books received
- Intimating schools that textbooks have arrived at office and schedule pick up
- Organising textbooks as per classes within the office for school pick up
- Maintaining a current enrolment record for each school
- Tallying books picked up by schools against order and current enrolment figures
- Delivering textbooks to schools in remote areas
- Maintaining a receipt or delivery status as per school
- Informing DSE Depot in case of shortage or excess because of current enrolment

Government Elementary Schools | Nagaland

- Maintaining a current enrolment record
- Checking on status of textbook receipt at SDEO or Block Offices
- Confirming participation on scheduled pick up day at SDEO or Block Offices
- Arranging transport and personnel for pick up on scheduled day
- Picking up textbooks as per current enrolment figures and received status
- Informing SDEO or Block Offices on shortage or excess due to current enrolment
- Distributing textbooks to students
- Maintaining a record of shortage by class, subject, and student

SCERT Textbook Supply Chain | Stage Seven

Delivery to Schools & Students



Actors Involved - Location and Key Roles

DSE Depot | Dimapur

- Recording shortage, excess or error in books received at SDEO and Block Offices
- Requesting DSE to reorder books with publishers based on shortage

DSE | Kohima

- Coordinating with Dimapur Depot in terms of shortages, excesses and errors
- Coordinating with SDEO and Block Offices in terms of enrolment figures
- Estimating reorder quantities for each textbook based on shortage and enrolment
- Placing reorders at publishers based on estimated reorder quantity

Systems, Tools, and Technology Used

Communication Channels & Tools

- Email
- Phone Calls
- WhatsApp
- Official Paper Trail
- Informal Paper Trail
- In Person Meetings

Other Tools

- Packaging material for books
- Trucks
- Storage for books at SDEO and Block Offices

SCERT Textbook Supply Chain | Stage Eight

Close of Process & Payments

Key Learnings

Informal Coordination to Address Gaps

- Teachers across schools at times informally coordinate to manage excess or shortage of books
- SDEOs coordinate amongst themselves to plug textbook shortage on account of continuing enrolment

Return of Excess Books is Complicated

- Return of excess books from both the School to SDEO and Block Offices, and from these Offices back to the Dimapur Depot is a complicated affair - books are often not returned or even if return is done - it can get highly delayed

Complete Delivery May Never Happen

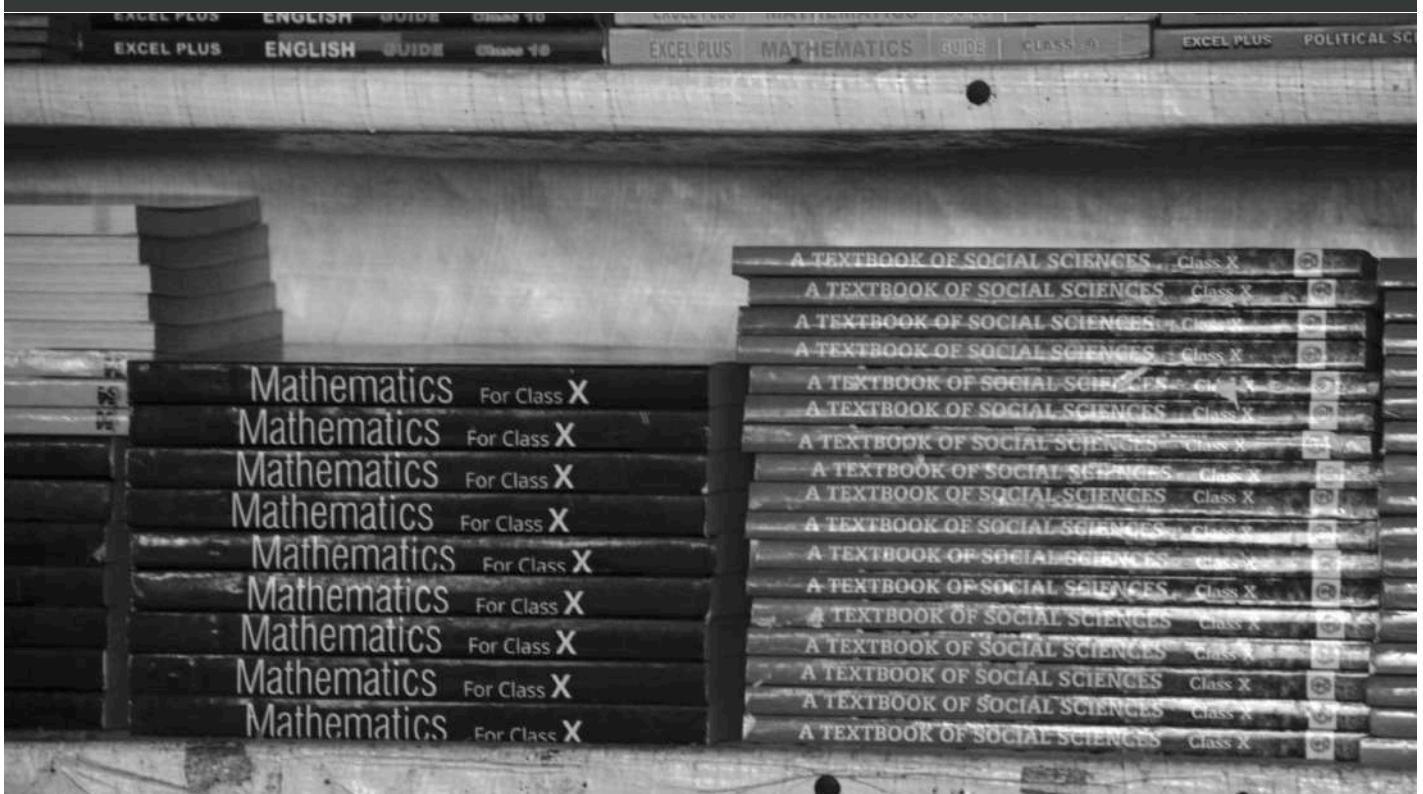
- It is quite likely that the books that are still in shortage moving into early March may take another 2-3 months to reach, or worse still, never arrive.

Reorders with Publishers

- DSE sometimes has to render books from Publishers. Even if the requirement is lesser, the DSE has to order the minimum batch size as per publisher (1000-2000 books)

Delayed Payments to Publishers

- Payments are supposed to be made in two stages - once the books are received, and then when the final distribution is finished. Final payments are however made much later, sometimes even in September or October. This is thanks to reasons around the change in financial year



SCERT Textbook Supply Chain | Stage Eight

Close of Process & Payments



Actors Involved - Location and Key Roles

SDEO and Block Offices | Nagaland

- Returning books taken in excess or by error back to Dimapur Depot
- Receiving shortage and missing books from Dimapur Depot
- Repeating relevant steps in previous stages of the supply chain

Government Elementary Schools | Nagaland

- Returning books taken in excess or by error back to SDEO or Block Offices
- Receiving shortage and missing books from SDEO or Block Offices
- Repeating relevant steps in previous stages of the supply chain

DSE Depot | Dimapur

- Receiving shortage and missing books from Publishers
- Repeating relevant steps in previous stages of the supply chain

DSE | Kohima

- Repeating relevant steps in previous stages of the supply chain
- Confirming that book quantity needs have been met
- Completing payments to Publishers
- Closing distribution for current academic year

Systems, Tools, and Technology Used

Communication Channels & Tools

- | | |
|---------------|------------------------|
| • Email | • Official Paper Trail |
| • Phone Calls | • Informal Paper Trail |
| • WhatsApp | • In Person Meetings |

Summary - Actors & Key Roles

SCERT Textbook Supply Chain

Actors and Major Responsibilities

Actors	1. Funding & Policy	2. Procurement	3. Textbook Content & Design	4. Publishing
Government of India	Allocate and approve funding for textbook procurement			
Government of Nagaland	Allocate and approve funding for textbook procurement			
SLEC	Frame policy on textbook procurement and approve funding			
SCERT	Recommend policies for textbook procurement and curriculum	Identify and empanel publishers. Negotiate pricing and delivery terms and quality standards	Identify content for next academic year and update or create textbooks as required	Stay informed of printing status. Check sample copies for quality
Language Officers			Translate the Naga Heritage Studies textbooks from English to local dialects	
Literary Boards			Approve content and translation for Naga Heritage Studies textbooks	
DSE	Recommend policies for textbook procurement	Contract the publishers as per terms identified by SCERT and place orders as per enrolment numbers		Stay informed of printing status. Check sample copies for quality
Publishers		Express interest to participate in process on terms specified by SCERT and DSE	Work with SCERT to update the layouts and content of textbooks and prepare for printing	Print textbooks at their own or contracted printing presses
Shippers & Transporters				
DSE Depot				
Sub-Divisional & Block Officers		Submit final enrolment numbers from schools to DSE so that they estimate overall procurement levels		
Government Schools		Provide final enrolment numbers to DSE that can be used for estimation procurement numbers		

SCERT Textbook Supply Chain

Actors and Major Responsibilities

Actors	5. Shipment to DSE Depot & HQ	6. Shipment to Sub-Divisions & Blocks	7. Delivery to Schools & Students	8. Close of Process & Payments
Government of India				
Government of Nagaland				
SLEC				
SCERT				
Language Officers	Receive the Naga Heritage textbooks in respective dialects	Ship the Heritage Studies books to the districts. Coordinate with SDEOs and Block Officers.		
Literary Boards				
DSE	Stay informed on the receipt status and coordinate with publishers	Stay informed of the overall status of distribution.	Stay informed of the overall status of distribution.	Re-order books with publishers in case shortages exist. Clear payments.
Publishers	Pack and ship books from printing presses to DSE's Dimapur depot			Ensure re-ordered books are delivered in a timely manner. Receive payments.
Shippers & Transporters	Transport books from printing presses to the DSE Depot in Dimapur or the DSE HQ in Kohima.	Load and transport books from Dimapur depot to the Sub-Divisional and Block Offices.		Ship re-ordered books to the DSE depot or the DSE HQ in Kohima.
DSE Depot	Receive textbooks at the depot. Schedule pick up by SDEOs and Block Officers.	Organise labour and transport for shipping. Prepare loads for each region as per enrolment.	Stay informed on shortages and excesses in different parts.	Ensure all schools have received books. Manage excess and shortage.
Sub-Divisional & Block Officers	Stay informed on textbook receipt status at DSE depot	Receive books from Dimapur depot Count books once back. Inform depot about errors.	Organise books by class and subject. Schedule pick up by schools. In rural areas deliver books.	Coordinate with DSE on shortage and excess of books. Ensure all schools have received books.
Government Schools		Stay informed on textbook receipt status at the Sub-Divisional and Block Offices.	Pick up books from Sub-Divisional and Block offices. Inform officers on shortage or excess.	Pick up books from Sub-Divisional and Block offices. Inform officers on shortage or excess.

Visioning Workshop

Visioning Workshop

Participant List

Menukhol John	Principal Secretary, DSE
Kevi Rio	Deputy Mission Director, Samagra Shiksha
Khrisenuo	Research Associate, SCERT
Lluheing Nsarangbe	NBSE, Kohima
S Nchumbemo	AEO, Wokha
Hentinthang	AEO, Peren
Sashipokla	AEO, Mokokchung
P Khugavi	AEO, Pughoboto
Pekruvoto	JEO, Kohima
Vesanyu	Coordinator, Chozouba
Swedeshinu	Head Teacher, Kohima
Catherine	SMC Member, Kohima
Vilavonuo	Head Teacher, Kohima
Avinuo	Head Teacher, Kohima
Kevin Sote	SMC Chairman, Kohima
Ganga	Head Teacher, Kohima
Khreiketuoлие	SMC Chairman, Kohima
Chegeseng	AEO, Tsumenyu
Kiyelho	AEO, Zunheboto
Viyeshe	AEO, Satakha
Thungchio	JEO, Bhandari
Nilokato	AEO, Dimapur
Tako	Text Book Incharge, DSE
Ruth	Text Book Cell, DSE
Kihoto Sema	AEO, Nuland
Y Nokkhar	SIS, Mon
Khatoli Khalu	Samagra, Kohima
Medohunuo	Academic Officer, SCERT
Kevileno	Mission Director, Samagra
Tsuren Odyuo	Senior Accounts Officer, DSE
Visato Koso	Coordinator, DSE
Khrietethoso	Coordinator, DSE
Among Anjo	Consultant

Visioning Workshop

Introduction

An Immersive, Safe Platform for Stakeholders to Identify Key Challenges and Potential Solutions

The Visioning Workshop was meant to be a culmination of the kick-off phase. Stakeholders from different points of the supply chain were brought together for a day in Kohima. The findings from the inception research were shared with the participants and key gaps plugged. Participants were divided into multi-disciplinary groups for the exercise.



Gap Identification

Detailed learnings by stage were shared and strengthened with the inputs provided by the participants.



Synthesis

A set of opportunities were synthesised based on the research learnings and discussions.



Ideation

An initial set of ideas were brainstormed - mapped to stages and three themes - Rewards and Incentives, Technology and Data, and New or Improved Processes.

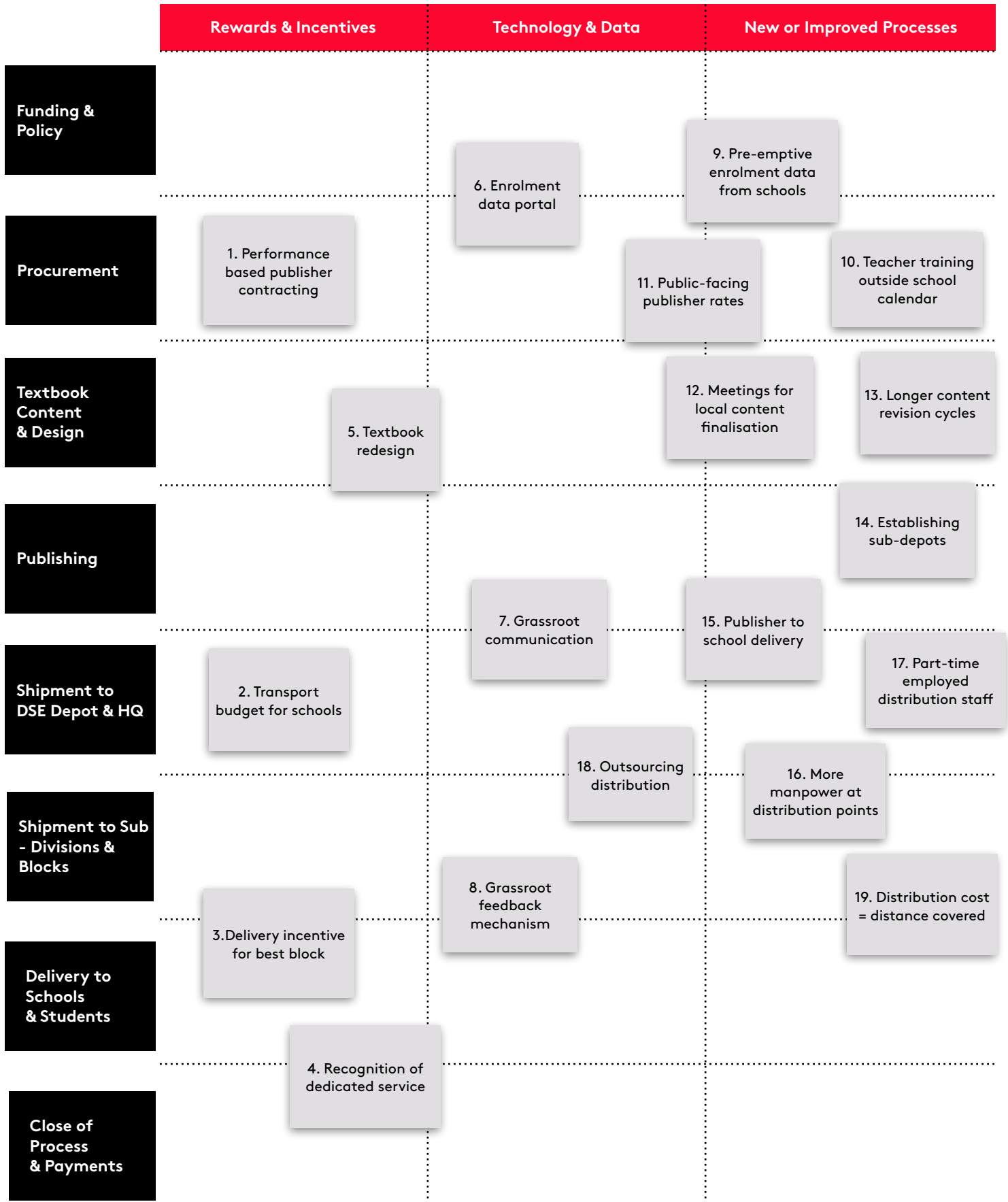
Focus of this section.

Note: The set of opportunities were synthesised based on the research learnings and discussions. They have been highlighted in the main body of this report.

Visioning Workshop

Ideation

The ideas generated by participants were mapped to the stages they were relevant to, as well as to three larger themes of Rewards and Incentives, Technology and Data, and New or Improved Processes.



FUNDING & POLICY ①

PROCUREMENT ②

TEXTBOOK CONTENT & DESIGN ③

PUBLISHING ④

Performance incentive w/ publisher (recurring contract or membership fee) Reward could be given to supplier who can print and write 2 more TBs than we give them

Single email portal for up-on enrollment data

Online rendering for last min. updation

Technology - Create portal to allow enrollment to textbook call.

Offline Mulps / school block level

Content presentation & design is learner friendly

Distribute point close to districts sub division

Dedication in service

Committee to be involved in estimating enrollment

Fix design for 5 yrs. & do not change

Fix price for publishing & do not negotiate per publisher

Time bound coordination w/ language boards "HACKATHON"

Better comm'n so that TB can be reused

Streamline teacher w/ shop & capacity develop training

Feedback from grass root direct w/ teachers

SHIPPING (4)

SHIPMENT (5)
TO DSE
DEPOT & HQ

SHIPMENT (6)
TO SUBDIVISION
& BLOCKS

DELIVERY TO
SCHOOLS &
STUDENTS (7)

CLOSE OF
PROCESS &
PAYMENTS (8)

Funds handled
by SDEO/BRC

Distribution
cost on basis
of distance

CITATION/AWARD
for best distributor
of TB @ important
time

Annual
Award given
to distributor
of TB

...

...

...

...

...

...

...

...

Distribution
point closer
to districts/
sub divisions



Distribution to Designated
District &
School w/
Retailer
Seasonal
contracts

Compensation
to schools to
pick up TB

New at Depots
Process
- Back log
at every district

To set up District
Depot like one
in Kuma
another in Haryana
Chang.

Other Comm
that TB
can be reused

Manpower @
Depot to assist
in sorting efficiently

Compensation firm
for distributor

Feedback from
grass root directly
of teachers

...

...

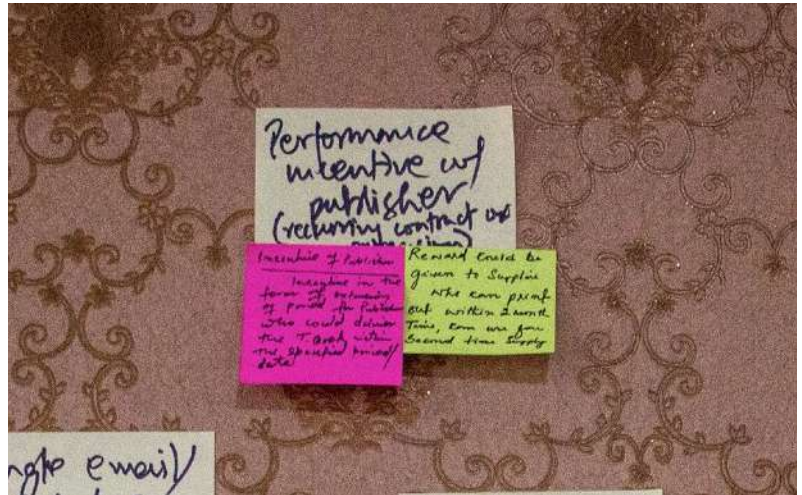
Visioning Workshop

Ideas | Rewards & Incentives

Ideation

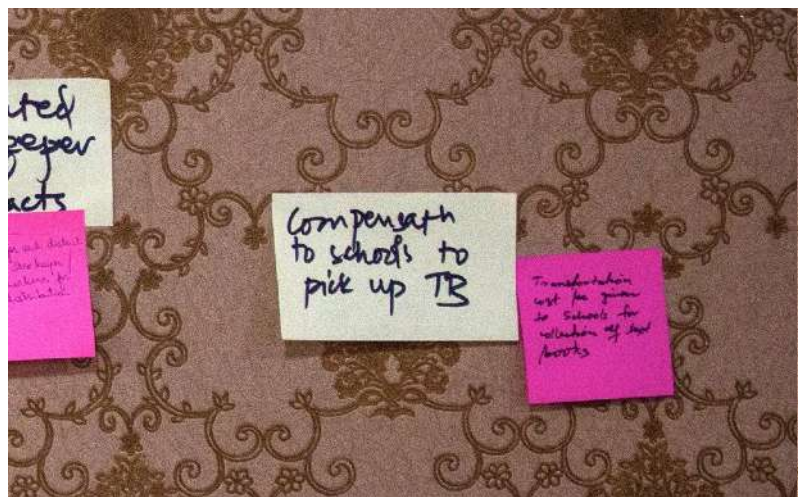
1. A performance-driven approach to publisher contracting

- Incentives in the form of contract extensions could be given to publishers who deliver textbooks on time.



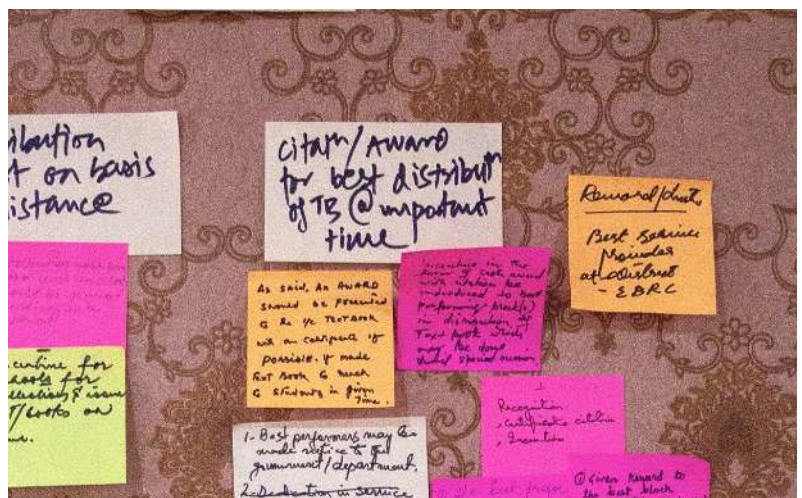
2. All-inclusive funds for transportation for schools

- Transportation costs are typically costs borne by school teachers, often underestimated owing to the staggered arrival of textbooks.



3. Incentive for best performing block in textbook delivery

- The announcement could be made and incentive given at the time of Teacher's Day.



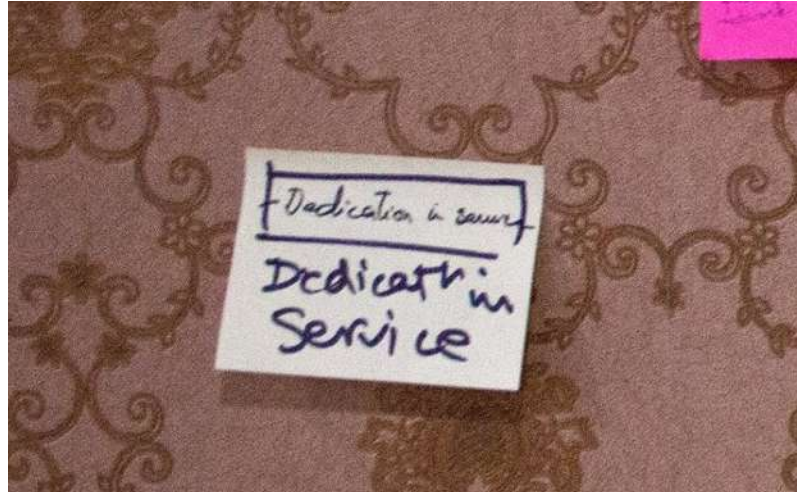
Visioning Workshop

Ideation

Ideas | Rewards & Incentives

4. Recognition of dedicated service

- Given low performance motivation thanks to factors like officers nearing retirement and other transitions, there is an opportunity to incentivise work for greater efficiency.



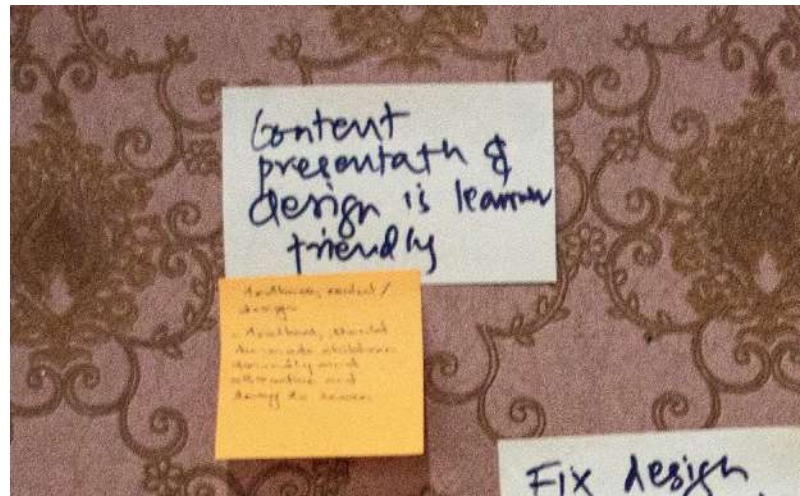
Visioning Workshop

Ideation

Ideas | Technology & Data

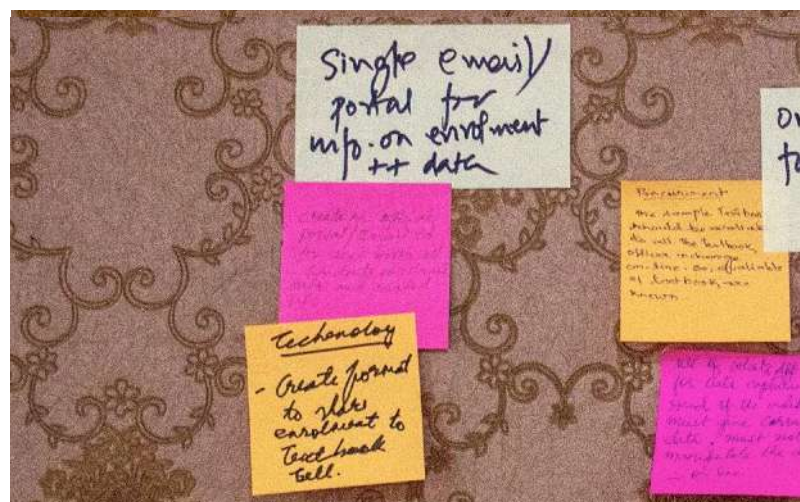
5. Textbook redesign

- While not entirely relevant to the supply chain, child-friendly redesign and technology-enabled content help make books more learner and teacher-friendly, and will help improve the pedagogy in the classroom.



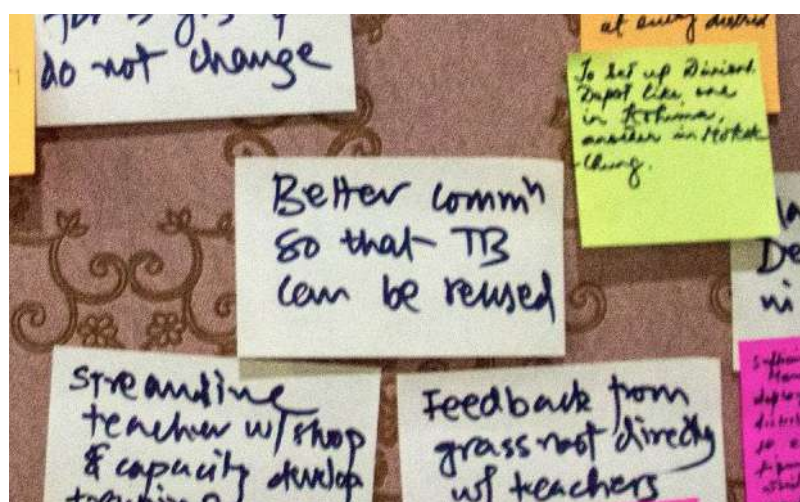
6. Online, live repository of school enrolment

- A dynamic estimation of demand will help account for year-on-year fluctuation and late enrolments
- Such a solution will have to consider remote areas with low connectivity



7. Better communication at the grassroots level

- Systems addressing local or block level coordination will help in dealing with common issues like delays and shortages.



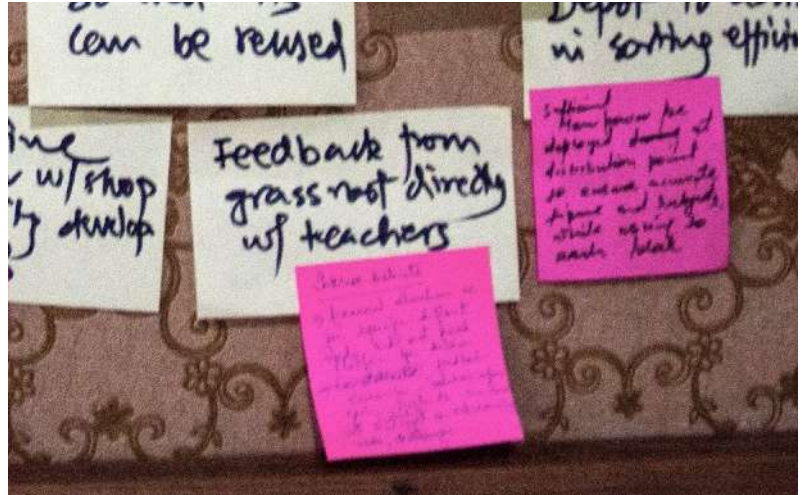
Visioning Workshop

Ideation

Ideas | **Technology & Data**

8. Feedback mechanism for teachers and grassroots-level staff

- Feedback systems for school-level concerns will help account for on-ground issues. This may happen through an annual conference or scheduled reporting.



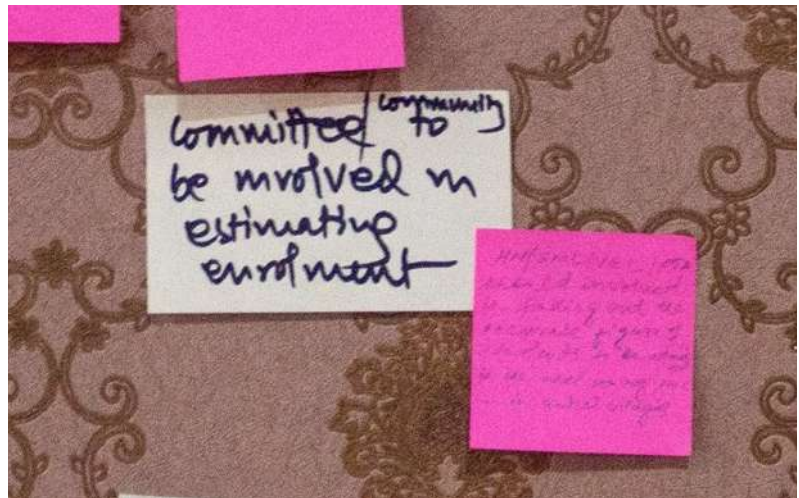
Visioning Workshop

Ideation

Ideas | **New or Improved Process**

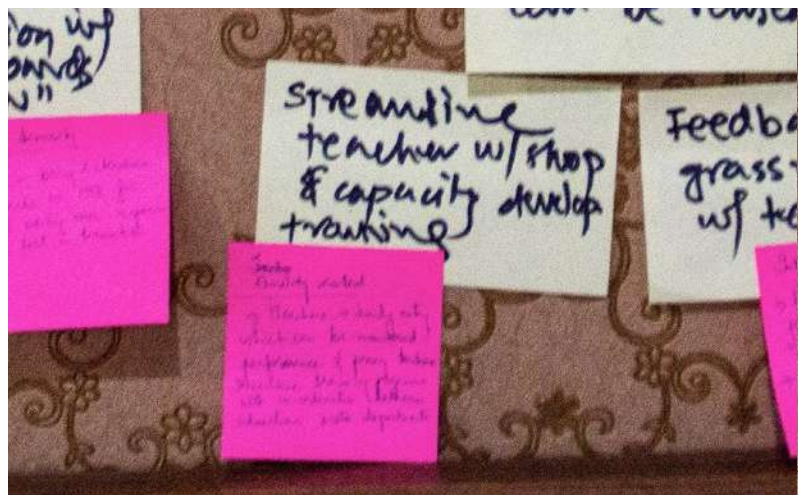
9. Pre-emptive enrolment data

- The school head teacher, SMC, and PTA, should work towards finding out the number of admissions for the following year.



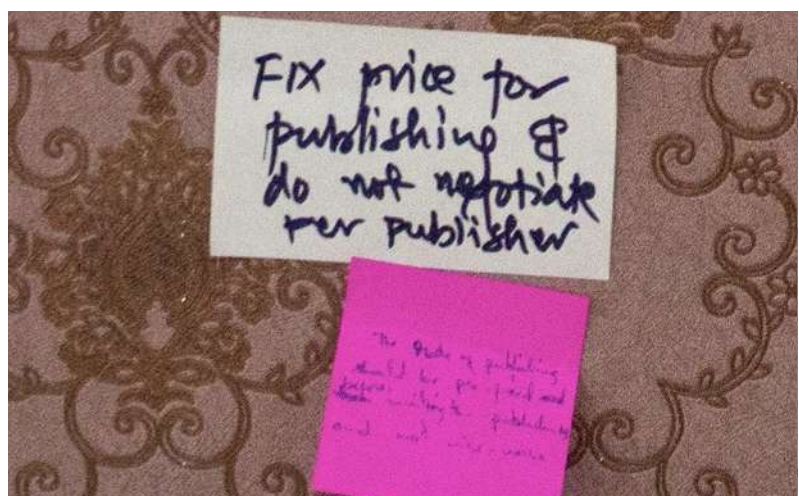
10. Teacher training schedules within school calendar

- Current training schedules conflict with working school days, hindering the timely completion of the syllabus.



11. Fixed, publicly accessible rate for publisher orders

- This will help establish transparency in the process and possibly quicken the process of publisher shortlisting and contracting.



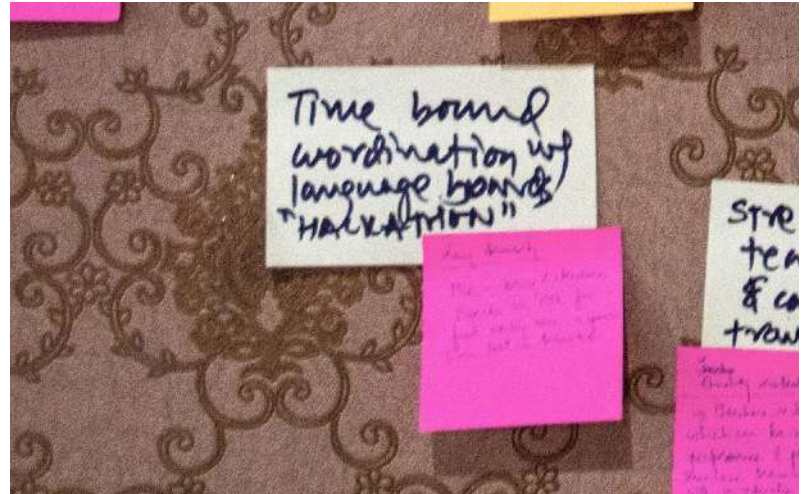
Visioning Workshop

Ideation

Ideas | **New or Improved Process**

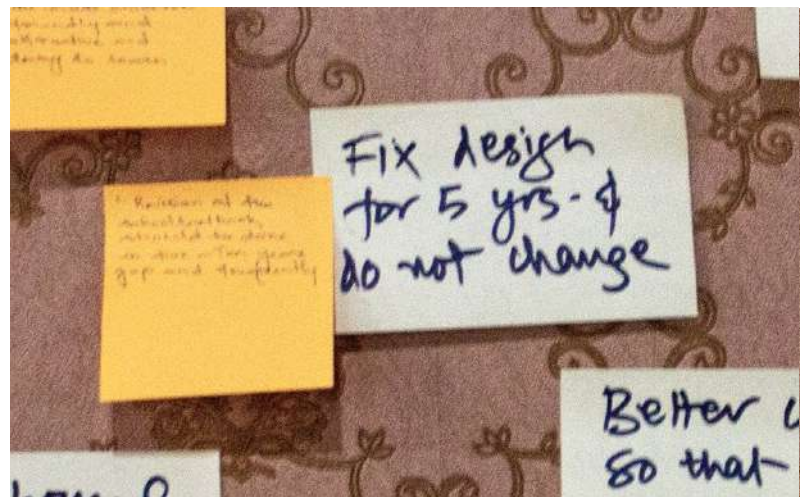
12. 'Hackathon' to develop and finalise content for mother tongue language textbooks

- Bringing literature boards, language officers, and other stakeholders to Kohima to finish all content changes within a stipulated timeframe



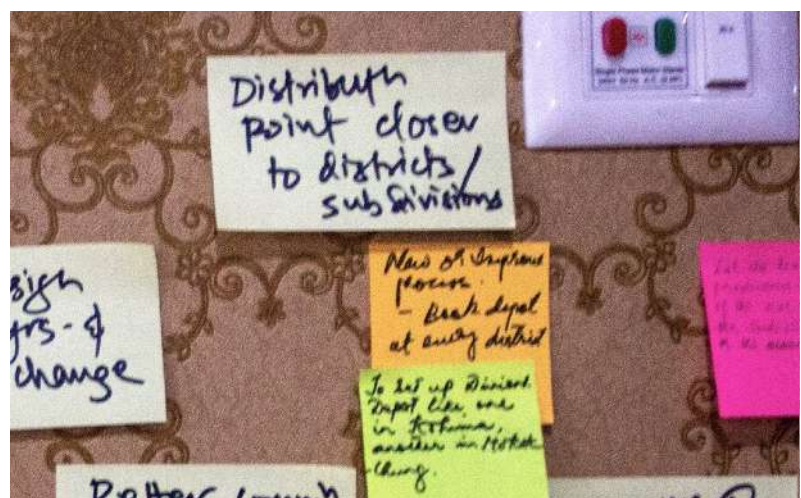
13. Longer content revision cycles

- Revision should be made in either 5 or 10 years, if revised, necessary people should be notified



14. Establishing sub-depots

- Sub-depots will help decentralise the current supply chain, addressing key logistical challenges.



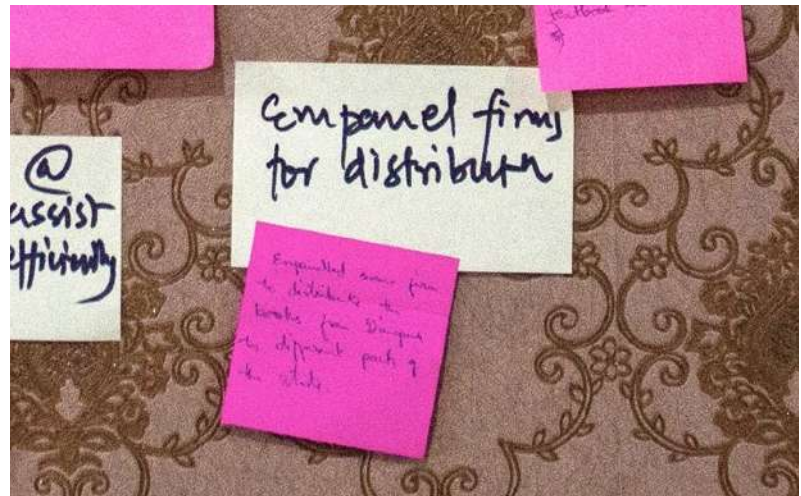
Visioning Workshop

Ideation

Ideas | **New or Improved Process**

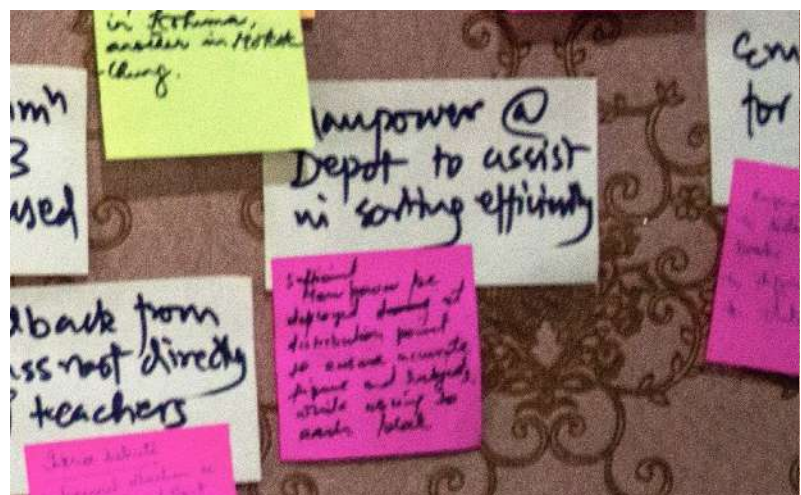
15. Outsourcing final delivery to publishers

- Making publishers responsible for textbook delivery at the subdivision and school levels will reduce the steps involved in the final distribution process



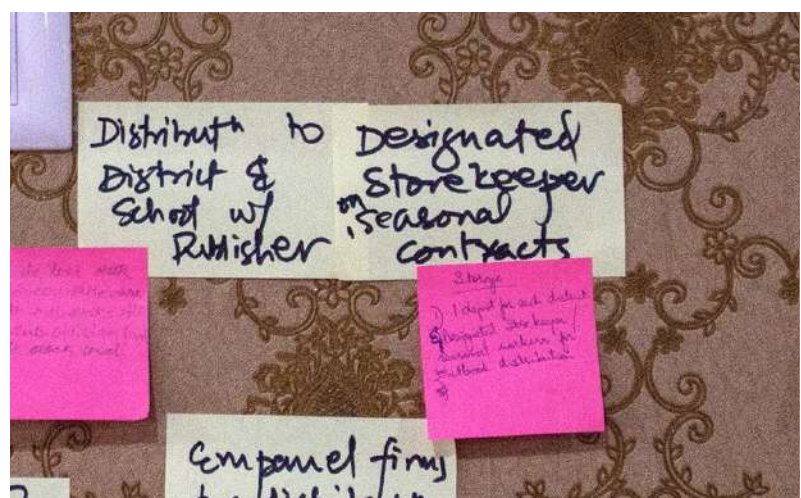
16. More manpower at distribution points

- This will help with strengthen capabilities for block-wise segregation higher accuracy in books allocated, and quality control.



17. Part-time employment of distribution staff

- A designated storekeeper and a part-time employment system will help combat staff shortage and last minute attrition at each level of transport and distribution.



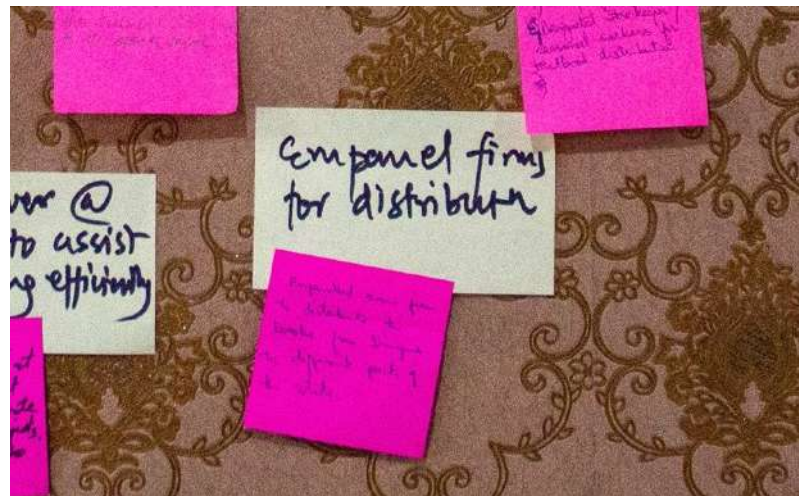
Visioning Workshop

Ideation

Ideas | New or Improved Process

18. Outsourcing distribution

- If direct school distribution by publishers is not possible, external firms can be empanelled for the same task.



19. Distribution of funds based on distance

- Distribution costs at the block and school levels should be commensurate with the distances and actual costs.
- This dynamic policy should be responsive to context-specific nuances of distribution.



Secondary Research

Secondary Research

Key Findings

Before the team headed to the field, a brief secondary research effort was undertaken.

The key findings from this effort were that -

- Delay in textbooks makes it to the news almost every year in the local papers.
- A number of students federations and pressure groups conduct audits of schools each year.
- A number of these federations are representative of different tribes. They do their field audits across the state and between them offer a sizeable sample and geographically spread.
- The student federations and pressure groups have often found textbooks missing on their trips and have been vocal in their criticism of the governments efforts in this regard.
- The situation in the current year seems to be better than the years past.

For the team going forward, it is recommended that these student and other similar community stakeholders be engaged and findings from their field audits be recorded.

Reference

General

[Report of the Comptroller and Auditor General of India](#)

[Decentralization from Below: A Case Study of Nagaland, India](#)

Nagaland Post

[Director of School Education Clarifies on Textbooks](#)

[School Education Department Clarifies on Textbooks Distribution](#)

[NSF Dismayed with Delay in Distribution of Textbooks](#)

Eastern Mirror

[MTLT Expresses Concern on Inadequate Textbooks](#)

[Headache for Athibung Schools as Textbooks Play Truants](#)

[NSF Serves Ultimatum to Edu Dept on Textbooks Issue](#)

The Morung Express

[School Textbook Delay: DoSE Points at Supplier](#)

[No Textbooks, No Classes](#)

[Textbooks to be Distributed after Elections](#)

**Results Based
Financing &
REACH**

Results-Based Financing (RBF) and Results in Education for All Children (REACH)

Results-based financing (RBF) holds out the promise of tackling spending inefficiencies and making more effective use of education resources. Results-based financing is an umbrella term referring to any program or intervention that provides rewards to individuals or institutions after agreed-upon results are achieved and verified. The approach has the potential to provide a stronger focus on the actions necessary to improve learning outcomes, foster local solutions to common education challenges, and strengthen the capacity of education systems to measure and track progress. However, these benefits arise from well-designed and well-implemented RBF programs. When interventions fail to meet these standards, they will have limited impact on reducing inefficiency and improving spending effectiveness.

RBF interventions have been used to incentivize many different actors and institutions within the education sector. Many countries have used RBF to provide **incentives to children and their parents** through conditional cash transfers and similar programs, with the aim of motivating students to attend and do well at school. Improvements in teacher attendance and teaching practice have been achieved using results-based financing to provide **incentives to teachers**. Some countries have also linked funding to school-level performance indicators to drive quality improvements. In decentralized countries, governments have experimented with incentivizing local governments and their officials by linking funding to subnational education results. RBF has also been used to tackle bottlenecks in different elements of education systems including **book delivery systems**.

In the education sector, many development agencies have begun to link development assistance to results in an effort to strengthen the efficiency and effectiveness of aid programs and ultimately to boost learning outcomes. The use of results-based financing in education is relatively new (the practice only began 8 years ago) and few programs have been evaluated. However, lessons on the design and implementation of **programs are already emerging**.

Reference

[Results-Based Financing in Education : Learning from What Works](#)

[Results-Based Financing in Book Chain](#)

[Challenges with RBF Approaches in Education](#)

[Results in Education for All Children \(REACH\)](#)

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