

F.No. 1-130/2019-KT
Government of India
Ministry of Human Resource Development
Department of School Education and Literacy
KT Section

New Delhi, the 18th Nov, 2019

To

The Secretaries(Education) of all States/UTs as per list attached

Subject: First meeting of the Steering Committee on Digital Infrastructure for Knowledge Sharing (DIKSHA) on 8th Nov, 2019 under chairmanship of Secretary, D/o School Education and Literacy, M/o Human Resource Development- Action thereon- Comprehensive Guidelines on minimum content requirement on DIKSHA for each State/UT-reg.

Sir/Madam,

I am directed to state that a Steering Committee has been constituted on Digital Infrastructure for Knowledge Sharing (DIKSHA) under the chairmanship of Secretary, D/o School Education and Literacy, M/o Human Resource Development, New Delhi vide order no. 1-121/2019-KT dated 7th October, 2019 (copy enclosed- **Annexure I**).

2. The first meeting of this Committee was convened on 8th Nov, 2019. In the said meeting, it was, inter-alia, decided that a set of comprehensive guidelines on minimum content requirement on DIKSHA for each State/UT along with content creation/curation/taxonomy guidelines will be prepared for sharing with all the States/UTs.

3. The said guidelines have been finalized and are being circulated herewith(**Annexure II**). The items mentioned in it are basic minimum requirements for all States/UTs who have already onboarded DIKSHA or are planning to do so. These are prescribed in the interest of setting minimum standards for DIKSHA and for ensuring that the user has a pleasant experience while visiting the DIKSHA platform.

4. All States/UTs are requested to follow these guidelines.

Yours faithfully,


(P.K. Bali)

Deputy Secretary to the Govt. of India
Tele No.: 23070186

Encl: As above

Copy to NIC with a request to upload the guidelines attached herewith on MHRD's website

Guidelines regarding Minimum Requirements for DIKSHA 2.0

The items below are the basic minimum requirements for all States/UTs who have already onboarded DIKSHA or are planning to do so. These are prescribed in the interest of setting minimum standards for DIKSHA and for ensuring that the user has a pleasant experience.

1. Institutional structure:

- Vide letter no. F. NCTE-Acad 024/7/2017-Acad-HQ-Part(1) dated 16 March 2018, it is suggested that the Steering Committee for DIKSHA be formed in each State/UT, headed by the ACS/Principal Secretary/Secretary School Education and include SPD SSA, Director SCERT and other key education officials in the State/UT. It is recommended that this Steering Committee should meet at a minimum frequency of once per quarter.
- NCERT is also requested to do the same.
- States, UTs and NCERT to notify MHRD of the setup of their respective Steering Committees and the list of members constituting the committee.
- In this context please refer to:
 - *Annexure I* for the letter sent to States/UTs to form Steering Committee in the State/UT
 - *Annexure III* for Committee setup guidelines

2. Onboarding Textbooks on DIKSHA:

- All government school textbooks of all States/UTs and NCERT should be uploaded on DIKSHA for all grades. The uploading of digital school textbooks should be medium wise, grade wise, subject wise, chapter wise and based on a predefined taxonomy. This activity, if not already completed, may be completed within this financial year (2019-20)
- Please refer *Annexure IV* for Taxonomy Guidelines

3. Scope for energized textbooks with DIKSHA QR Codes:

- States/UTs are requested to energize¹ all their textbooks with DIKSHA QR codes.
- To start with, textbooks of the core subjects for classes 6 to 10 in State/UT medium and English medium should be energized with DIKSHA QR codes.
- There should be at least 1 DIKSHA QR code per chapter with curriculum linked

¹ An Energized Textbook is a textbook that helps students and teachers access relevant curriculum linked digital content to address their needs for learning and teaching. This is achieved via DIKSHA QR codes placed in the physical textbooks which can be scanned via DIKSHA mobile app or web portal. More than 45 crore copies of ETBs have already been printed and distributed across the nation

curated digital content that should include - suggested lesson plans, clear, defined and codified learning outcomes, items for assessing learning outcomes and explanation video content for hard concepts in the chapter.

- NCERT will do the same for textbooks of English and Hindi Medium.
- This activity is to be initiated immediately and completed within one year from now.
- In this context please refer to:
 - **Annexure II** for the letter sent to States/UTs dated 21st February 2018 stating the decision to extend DIKSHA to all States and UTs.
 - **Annexure IV** for Taxonomy Guidelines
 - **Annexure V** for Toolkit for Energized Textbook
 - **Annexure VI** for Indicative Content Guidelines for Video Content
 - **Annexure VII** for CBSE Guidelines for other Content Types • Guidelines for difficult/hard/hot spots in topics too will be shared separately by MHRD

Medium	English + State/UT Medium
Grade	Class 6 to 10
Core Subjects	English (if taught), State/UT language, Mathematics (both mediums), Science (both mediums) and Social Science (both mediums)
QR Code	At least 1 DIKSHA QR code per chapter
Type of Content	Suggested Lesson Plans, Learning Outcomes (LOs) that are clearly defined and codified for each concept/topic, Items for Assessing Learning Outcomes and Explanation Video Content for concepts in the chapter

4. Energise NCERT textbooks:

- All textbooks of NCERT to be DIKSHA QR coded and all relevant curated digital content and e-resources for teachers and students residing in NROER and e-Pathshala should be synced with and onboarded on DIKSHA with DIKSHA QR codes by March 2020.

5. Children With Special Needs (CWSN):

- All energized textbooks to have an audio version of the textbooks along with

content in sign language aimed at Children With Special Needs (CWSN). This exercise is aimed to be completed in 2 years.

- Guidelines for featuring content for CWSN to be shared separately by MHRD

6. Innovative content on DIKSHA:

- Teachers of senior secondary grades (class 11-12) in all States/UTs to be trained on content creation for them to create and share innovative content, with relevant taxonomy, as per the content guidelines.
- The curated innovative content to be linked with DIKSHA QR codes in energised textbooks (ETBs).
- Please refer to the following in this regard:
 - *Annexure VI* for Indicative Content Guidelines for Video Content
 - *Annexure VII* CBSE Guidelines for other Content Types

7. Vidya Daan:

- States/UTs to crowdsource digital content from teachers/experts/other institutions, in accordance with the Vidya Daan program championed by CBSE
- Guidelines for crowdsourcing of content to be shared separately by CBSE

8. Difficult Topics²:

- Teacher and student facing content on difficult areas or hard/focus/hot spots must also be developed and subsequently the same must be linked to the energized textbooks with relevant taxonomy.
- Guidelines for difficult topics to be shared separately by MHRD

9. Content improvement:

- States/UTs to improve upon their existing content pieces leveraging the content guidelines.
- Content improvement will be an important component of the content lifecycle on DIKSHA
- Please refer to the following in this regard:
 - *Annexure VI* for Indicative Content Guidelines for Video Content
 - *Annexure VII* CBSE Guidelines for other Content Types

10. Certification of content:

- All States/UTs to undertake the review of all existing content on DIKSHA for errors / mistake / non-conformity with curation and Taxonomy Guidelines.
- Consequently, all States/UTs to sign and send the 'Self Declaration and Certification for all Existing Content on DIKSHA'

² Difficult Topics: The concepts which are important and/or difficult for the learner to understand or for the instructor to teach

- This is to be completed within 6 months of receiving this letter, and MHRD is to be informed about the completion of this process in 6 months.
- Please refer *Annexure VIII* for the letter and "Self-Declaration and Certification for Existing Content on DIKSHA" template

11. Onboarding all initiatives of States/UTs:

- All students and teachers should be exposed to a single digital platform for all their academic needs. This will ease their discoverability and usability of technology initiatives of departments, States/UTs. In this context, all content and technology initiatives of States/UTs relevant for students and teachers to be brought on to DIKSHA with relevant taxonomy.
- Please refer to the following in this regard:
 - *Annexure IV* for Taxonomy Guidelines
 - *Annexure VI* for Indicative Content Guidelines for Video Content
 - *Annexure VII* CBSE Guidelines for other Content Types

12. Teacher Training initiatives:

- Key Teacher training initiatives of State/UTs and NCERT (like NISHTHA) should be brought on to DIKSHA and linked with energised teacher handbook with relevant taxonomy to ensure that such important trainings and associated materials are available to all teachers in the State/UT through DIKSHA
- Guidelines for Teacher Training to be shared separately by MHRD

13. Energised teacher handbook:

- An energised teacher handbook to be given to teachers of class 6 to 10 containing:
 - clearly defined (with action verb and expected behaviour) and codified learning outcomes for each topic, in each subject, in each grade
 - innovative lesson plan/pedagogy to facilitate learning of given concept,
 - real-life situations mapped to the concept,
 - assessment rubrics/tools,
 - competency-based items for assessing attainment of learning outcomes
 - content related to difficult areas/hard spots
 - peer learning suggestions,
- The DIKSHA QR codes in the handbook will enable the teachers to have quick access to the digital content of the handbook.
- Guidelines for energised teacher handbook to be shared separately by MHRD
- Please refer *Annexure IX* for a sample energised teacher handbook

14. Energised parent handbook:

- Teachers to be equipped to communicate the essence and use-cases of DIKSHA to

parents.

- An energised parent handbook to be given to parents highlighting how DIKSHA will be useful for their children and how as parents they can help and support their children achieve their academic goals and to enable them to become part of their children's learning journey.
- DIKSHA QR codes in the handbook will enable the parents to have quick access to the digital content of the handbook and to develop quick assessments of learning levels of their wards.
- Guidelines for energised parent handbook to be shared separately by MHRD

15. Outreach and feedback:

- States/UTs to take active steps in the direction of popularizing the initiative and increasing its usage for teaching and learning inside and outside the classrooms.
- States/UTs to formulate mechanisms to gather feedback from teachers, students and parents and improvise upon their content on DIKSHA using the feedback, user trend and other consumption data insights.
- Please refer to the following in this regard:
 - *Annexure VI* for Indicative Content Guidelines for Video Content
 - *Annexure VII* CBSE Guidelines for other Content Types
- Guidelines for outreach and feedback to be shared separately by MHRD

16. Demo Classes:

- States/UTs are requested to identify a school in each cluster to provide demo to the cluster schools on how to access content on DIKSHA mobile app and web portal for various use cases inside and outside the classroom.

राष्ट्रीय अध्यापक शिक्षा परिषद
(भारत सरकार का एक विधिक संस्थान)



National Council for Teacher Education
(A Statutory Body of the Government of India)

F.NCTE-Acad024/7/2017-Acad-HQ-Part(1)

March 16, 2018

To,

The Secretary (School Education),
Government of Andhra Pradesh,
J Block, 3rd Floor, Andhra Pradesh Secretariat,
Hyderabad – 500022,
ANDHRA PRADESH

Sir / Madam,

It may be informed that in the budget speech of the Finance Minister for 2018-19 emphasis was laid on technology as a big driver in improving the quality of education. In this regard, DIKSHA was named as the instrument for quality intervention for school teachers and teacher educators. In this context, DIKSHA (Digital Infrastructure on Knowledge Sharing), a national IT platform for teachers, is being developed by the DoSEL, MHRD, GoI and NCTE as a Comprehensive repository for all aspects related to the data, capacities and professional development of school teachers, teacher-educators and teacher – pupils in the country.

2. Pursuant to the above developments, please refer to the letter D.O. 11-73/2017-EE.10, dated 21st February, 2018 vide which the proposed verticals of DIKSHA were introduced. I am confident that your State/UT would have by now taken all the steps as outlined in the said letter which are a pre-requisite for participating in this unique initiative.

3. I am writing now to request you to take up the next steps for the purpose of realizing the DIKSHA programme implementation in a time bound manner. The following will be required from your end at this stage:

1. Teacher Profile and Registry-

- i. **From DIKSHA:** This is the first and main vertical of DIKSHA without which in-service teachers cannot log on to the portal. Only those teachers that are registered through this vertical will derive the benefits of this portal in its entirety. Therefore, I am enclosing all the indicators of this vertical with data structure at Annexure A. On the basis of these profile fields, software is being developed.
- ii. **Your role:** States/UTs will be expected to ensure capturing of data for teacher registry based on the identified fields. It will also be possible to validate Teacher profile for in-service teachers by converging data from existing databases or collecting data from the field. The software is expected to be rolled out in the third week of April, 2018. Meanwhile the State/UTs may keep their plan and strategy in readiness for compiling and uploading this data as soon as we share the link for the said software.

2. Energized Textbooks (ETB) –

- i. **From DIKSHA:** As a part of the Teaching Learning Material vertical, Energized textbooks (ETB) are being prepared by several states. ETBs use QR codes to link the aggregated/created digital content with the existing textbooks. Such aggregated/digital content can be used both by the teachers and the students.
- ii. **Your role:** Brief note on Energized Textbooks and steps involved in rollout of ETB is enclosed in **Annexure B** of this letter. States/UTs are requested to consider rolling out energized textbooks based on the process shared.

3. Roadmap for the quick adoption of DIKSHA in States-

- i. **From DIKSHA:** In order for states to on-board onto DIKSHA, an indicative roadmap with timelines is enclosed in **Annexure C**.
- ii. **Your role:** States are requested to submit their DIKSHA implementation plan for review and finalization on or before 31/03/2018 to the undersigned. The plans submitted by states will be reviewed in the regional meetings to be held under the chairmanship of Secretary, DoSEL, MHRD, GoI from 6th April, 2018 onwards.

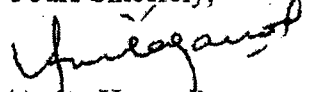
4. Guidelines for on-boarding –

- i. **From DIKSHA:** Guidelines for curation and taxonomy will be shared with the states before the start of MHRD regional workshops in April, 2018.
- ii. **Your role:** On receiving the said guidelines, the States/UTs are expected to set up their own Curation and Taxonomy committees and begin their association with DIKSHA by first uploading available content/material. Therefore, it is requested that states/UTs may begin the process of identifying available content for DIKSHA. You are also requested to roll out a plan for creating other useful content for DIKSHA thereafter and implement the same.

4. It is accordingly requested to initiate necessary action on the above-mentioned interventions so as to make DIKSHA a vibrant and utilitarian platform. In case of any query, you may contact Sh. Saurabh Chopra, Head Team DIKSHA at saurabhc@centralsquarefoundation.org or Sh. Sanjay Awasthi, Member Secretary, NCTE at ms@ncte-india.org.

With Regards,

Yours Sincerely,


(Anita Karwal)
Chairperson

Encl : As above

Annexure B- Note on Energized Textbooks (ETB)

As part of upgrading the overall teaching-learning experience in classrooms, students along with the teachers need to be given access to rich, qualified and illustrative content in addition to the textbooks. Provision of such additional content resources will allow both students and teachers to adequately prepare and also have qualitative 'takeaways' from the classroom sessions. For instance, students can leverage such additional content resources to help them understand subjects and individual concepts better, self-assess their proficiency levels and improve accordingly; thereby enriching their ongoing learning process. Along with external paper-based study resources to aid the learning experience, students and teachers had been increasingly moving towards the digital medium for access to better quality content over the years. Traditionally, both students and teachers had to rely on public websites to search and access digital content resources, thereby making the entire process cumbersome and not very 'contextual'.

The "Energized Textbooks (ETB)" solution is designed to address this very specific need and bring about transformative changes to the overall educational experience for all stakeholders involved. By providing an ability for the teachers to pool and create the relevant learning content for students, the ETB solution facilitates the provision of qualitative content resources in a more 'contextual' fashion. The ETB solution enables this by leveraging QR codes to link aggregated/created digital content with the existing physical textbooks. The following figure illustrates the concept of energized textbooks from both the perspectives- student as well as teachers:

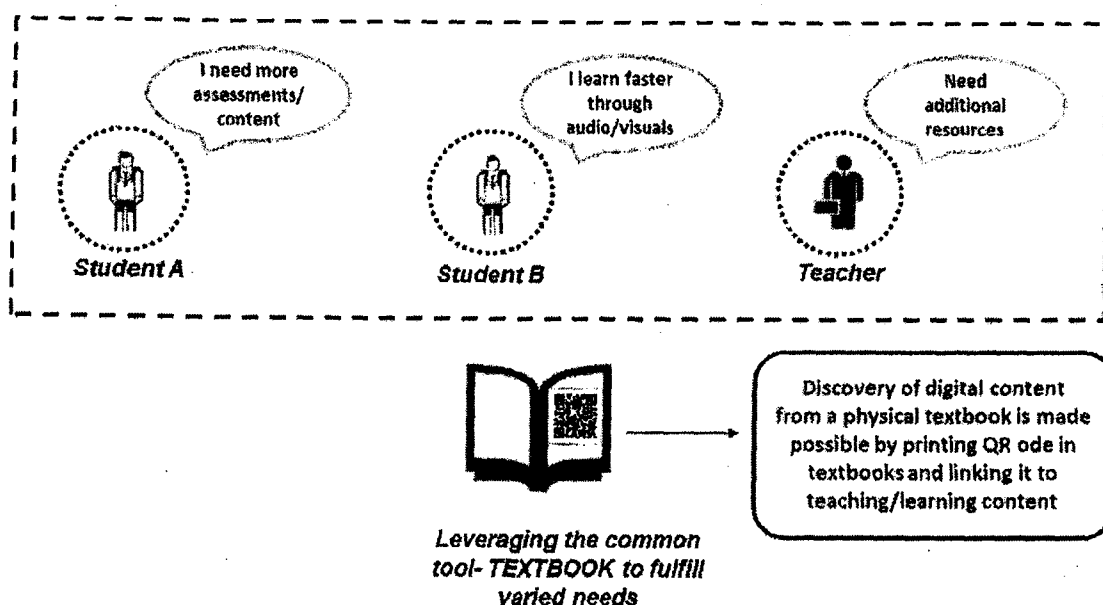


Figure 1: Energized Textbooks

Need for ETB

The use case for QR code enabled textbooks, stems from various real life classrooms/self-learning scenarios today (few scenarios are illustrated in the following figure):

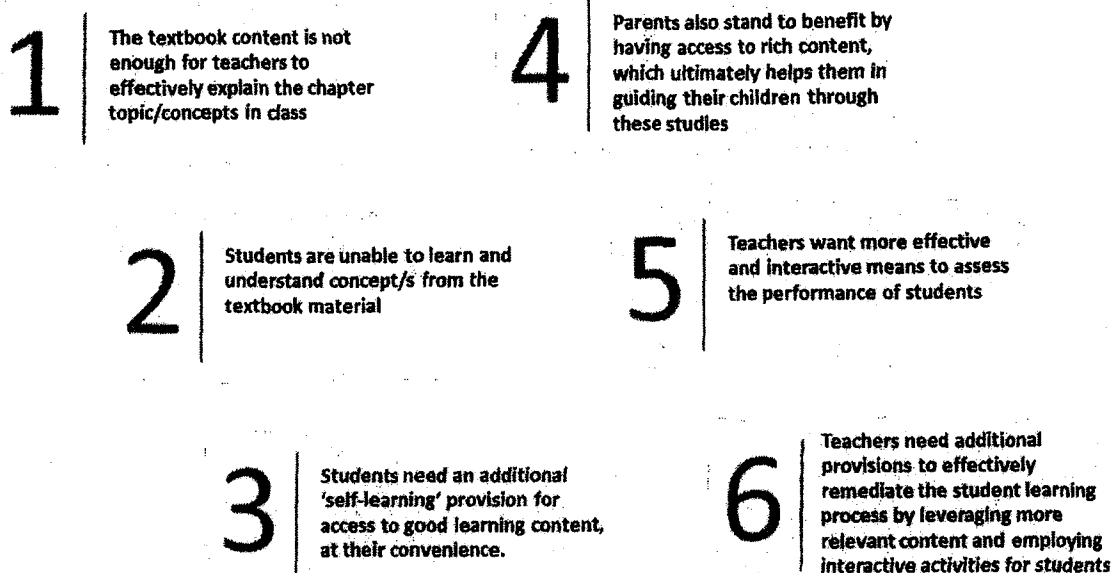


Figure 2: Industry need for 'Energized textbooks'

To ensure a contextual learning experience for the students as well as the availability of an effective content resource pool for teachers, it's imperative that the positioning of QR codes (i.e. "hard spots" in a textbook) are identified in a logical way. QR codes can be positioned at a chapter/topic/sub-topic level to contextualise the additional content resources better. For e.g., some teachers may want all the additional resources of a specific 'chapter' to be linked to one QR code positioned at the 'chapter' level.

The QR code images are placed at these identified hard spots in the textbooks. The type of content/resources can vary across text (PDF file, PPT), pictures, videos, mind map etc. The following figure illustrates the considerations for positioning of QR codes:

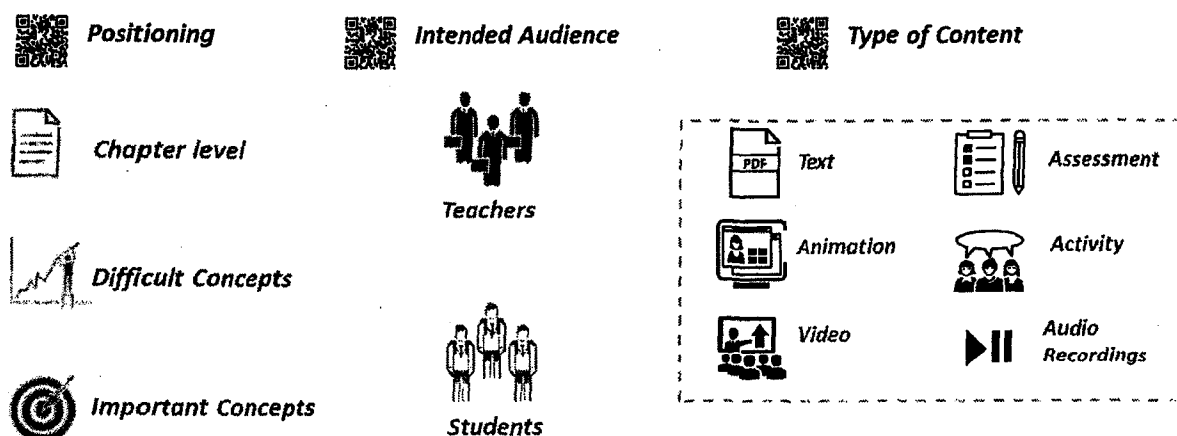
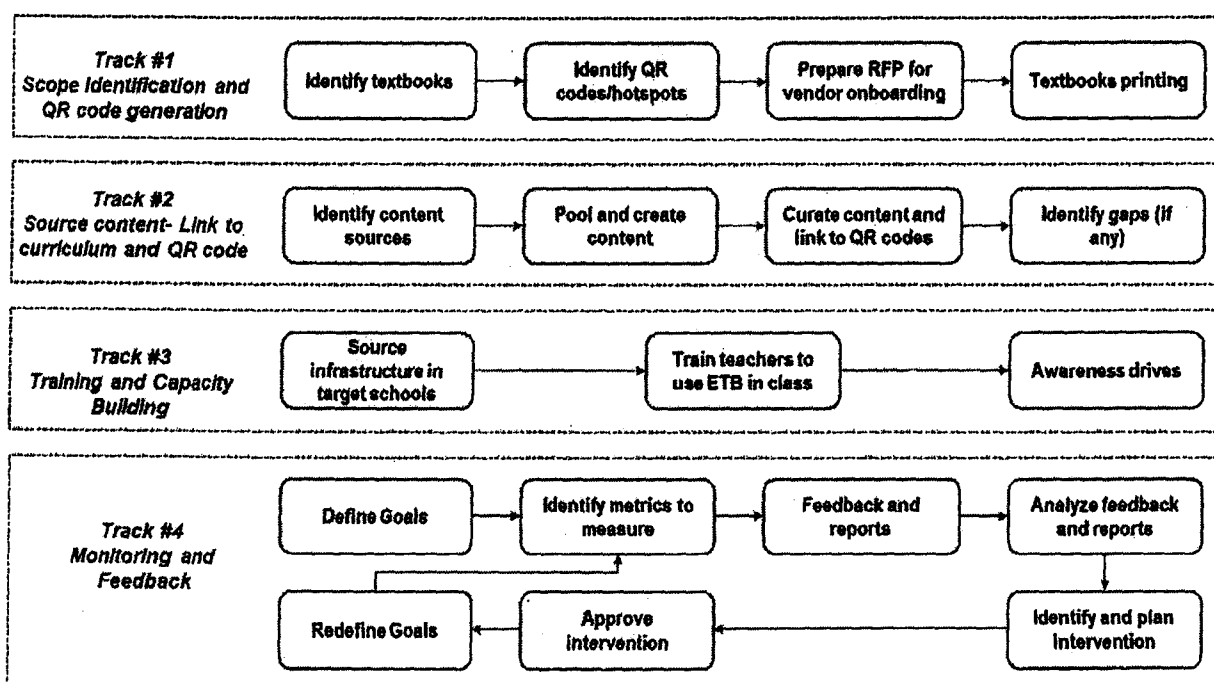


Figure 3: Considerations for positioning of QR code

Track-wise rollout of ETB

The approach for rollout and use of ETBs across the state can be divided across 4 key tracks:

1. **Scope identification and QR code generation:** Scope identification will comprise of identification of grades, languages, subjects, users (teachers/students/both), type of content required- classroom resources, videos, lesson plans, teacher instructions etc. Number and placement of QR codes will be identified and finalised before sharing the guidelines and content with the printing vendor/s.
2. **Source content:** Curating content and linking it to the right chapters as per the textbook table of contents is important. There are various methods through which content can be collated, created, curated and made ready to use- existing content on the internet, content providers/partners who have an interest in sharing their content, content available on DIKSHA through content providers and states, content created previously by expert/technology savvy teachers and content created by teachers using DIKSHA authoring tool/other sources.
3. **Training and capacity building:** Conducting workshops (in labs/online trainings) for teachers and/or master trainers on QR code placement, content creation, pooling and curation as well as training teachers on using ETB in classrooms.
4. **Monitoring and feedback:** As energized textbooks and associated processes get rolled out, they need to be refined for continuous improvement. It becomes imperative to gather feedback and leverage data, tools and reports to analyse the feedback and act on it.



Annexure C- Suggested State Roadmap for adoption of DIKSHA

PHASE	ACTIVITY	TIMELINE
INSTITUTIONALIZATION	Appointment of SCERT as the nodal agency and SCERT Director as nodal officer for DIKSHA implementation in the state	February - March 2018
	Formation of Steering Committee to monitor DIKSHA implementation. It is suggested that the Steering Committee be headed by the Secretary/Principal Secretary/ACS Education and include SPD SSA, Director SCERT and other key education officials in the state.	
	Formation of PMU for implementation of DIKSHA in the state. It is suggested that this PMU include representatives from DIETs and subject matter experts.	
	Formation of Content Committee which will be responsible for content curation and taxonomy related tasks.	
	Formation of Technology Committee which will be responsible for data and technology related tasks.	
PREPARATION	Collection of data of teachers, teacher educators and school administrators in the formats provided by MHRD / DIKSHA team.	April - June 2018
	Collation of available digital content for <ul style="list-style-type: none"> teaching & learning (curriculum linked content) teacher training & professional development school leadership 	
	Plan for creation of digital content for <ul style="list-style-type: none"> teaching & learning (curriculum linked content) teacher training & professional development school leadership 	
	Identification of grades, subjects, medium for implementation of Energized textbooks	
	Creation of outreach, communication and dissemination plan for DIKSHA	
	Creation of capacity building plan for State Officials, District Officials, BRCs, CRCs for DIKSHA usage	
	Creation of capacity building plan for teachers for DIKSHA usage and creation & consumption of content	

PHASE	ACTIVITY	TIMELINE
SET-UP	Set-up of state homepage on DIKSHA portal with assistance from DIKSHA tech team	July - September 2018
	Upload/sync data of teachers, teacher educators and state administrators	
	Upload of taxonomy for different verticals	
	Curation and Upload of available content for <ul style="list-style-type: none"> teaching & learning (curriculum linked content) teacher training & professional development school leadership 	
IMPLEMENTATION	Outreach and communication to onboard teachers and other users to DIKSHA	July 2018 onwards
	Updation of all teacher trainings on DIKSHA	
	Creation of digital content for <ul style="list-style-type: none"> teaching & learning (curriculum linked content) teacher training & professional development school leadership POST NAS ICT material development 	
	Translation of exemplar digital content for <ul style="list-style-type: none"> teaching & learning (curriculum linked content) teacher training & professional development school leadership 	
CAPACITY BUILDING	Implementation of Energized Textbooks <ul style="list-style-type: none"> Identification of topics for placement of QR codes Mapping to content to QR codes Printing of textbooks 	July 2018 onwards
	Capacity building for State Officials, District Officials, BRCs, CRCs for DIKSHA usage	
	Capacity building for teachers for DIKSHA usage and creation & consumption of content	

ANNEXURE-II



Maneesh Garg
Joint Secretary
Tele: 011-23386232
Email: maneesh.garg@ias.nic.in



सूचना का
अधिकार

भारत सरकार
मानव संसाधन विकास मंत्रालय
स्कूल शिक्षा और साक्षरता विभाग
शास्त्री भवन

नई दिल्ली - 110 115

GOVERNMENT OF INDIA

MINISTRY OF HUMAN RESOURCE DEVELOPMENT
DEPARTMENT OF SCHOOL EDUCATION & LITERACY
SHASTRI BHAVAN
NEW DELHI-110 115

D.O. 11-73/2017-EE.10

Dated: 21st February, 2018

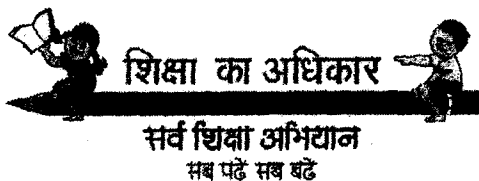
Dear Sir /Ma'am,

As you are aware, DIKSHA (Digital infrastructure or Knowledge Sharing), a national platform for teachers, developed by NCTE, was launched on 5th September, 2017 to accelerate and amplify solutions, experiments and innovations that are underway and/ or being undertaken in the areas of teacher training and professional development. Further, the budget speech of the Finance Minister for 2018-19 laid emphasis on technology as the biggest driver in improving the quality of education, while DIKSHA was named as the instrument for quality intervention for school teachers, teacher educators and student teachers in Teacher educational institutions.

2. Pursuant to the above developments, it has been decided to extend DIKSHA to all States and UTs. DIKSHA will incorporate six verticals which will be ready by first week of March. The proposed verticals and their features are as follows:

Teacher Profile and Registry: Teacher Profile will be collected for in-service teachers and teacher educators by converging data from U-DISE, Shalakosh, Prashikshak or any other existing data base. The profile field has been finalised and the software is being developed. The software will incorporate in-service Teacher Training details also. The state will be expected to populate this by end of March, 2018.

- i. **Teacher Professional Development:** This will consist of modules for aiding teachers in their professional development and building capacities in newer areas. The modules will be contributed by the Centre, States and other partners authorized by DIKSHA. As of now, available 142 modules from NROER/some partner organisations have been uploaded on DIKSHA.



- ii. **Teaching and Learning Content:** This will consist of content that can be directly used by teachers in classrooms, for making their lesson plans, for introducing digital and joyful learning experiences, etc. The content will be contributed by the Centre, the States and by other authorised partners of DIKSHA. As of now, 2918 resources are available/uploaded on DIKSHA which includes Modules from CBSE and NROER/E- Pathshala, Modules from States such as, Andhra Pradesh, Maharashtra and Tamil Nadu and Modules from some partner organisations.
 - iii. **Common Platform for Teachers to create/upload their own material/content:** This will be done by teachers and heads of Schools. This platform will encourage teachers to excel and to connect with their students in an innovative manner.
 - iv. **School Leadership Platform:** This will be developed in discussion with NIEPA and will essentially be an exclusive platform for school Principals, Vice-Principals, Heads of Schools, etc.
 - v. **Miscellaneous:** This will include news and announcements featuring laws/ regulations/ circulars/ directions from the Centre and States, State Training Calendars, Best practices from states in Teaching-Learning, NAS results, Teaching Learning Management systems, etc.
3. It is requested to ensure effective implementation and usage of the DIKSHA in your State/UT, by taking the following steps immediately:
- i. Director, SCERT may be appointed as the Nodal Officer and SCERT may be designated as nodal agency for DIKSHA implementation in your State/UT.
 - ii. List out available material in the six identified verticals and upload the same on DIKSHA after due curation. The guidelines for curating the materials will be shared soon.
 - iii. Prepare other useful, original, and innovative teaching-learning content and utilize DIKSHA platform for disseminating these contents.
 - iv. The DIKSHA portal will reflect the details of teacher's training. You are requested to ensure that Teacher profile for all teachers is populated in time, so that you may use this platform for designing your in-service teacher trainings, assess training needs, etc.
 - v. It is also informed that from the financial year 2018-19, disbursement of funds under Teachers and Teacher Education will be linked to the achievements in teacher training and population of data on Teacher's profile and registry.
 - vi. While MHRD will be developing Guidelines for translation of content/sub-titles in English and Hindi, the actual translation of courses into vernacular languages shall be owned by the State/UTs. The guidelines in this regard will be shared shortly.

vii. DIKSHA portal can be viewed on www.diksha.gov.in. The details of State login and password will be issued separately.

4. It is therefore requested to initiate necessary action on the above mentioned interventions so as to make DIKSHA a vibrant and utilitarian platform, and inform us of the action taken at your end, latest by 28th February, 2018. In case of any query, you may contact Sh. Saurabh Chopra, Head DIKSHA PMU at saurabhc@centralsquarefoundation.org or Sh. Sanjay Awasthi, Member Secretary, NCTE at ms@ncte-india.org.

With regards,

Yours sincerely,

Maneesh Garg
(Maneesh Garg)

To,
Principal Secretary/Secretary, Education All States and UTs

Committee Setup Guidelines

Sl. No.	Steering Committee	Project Management Unit
1	<p>Steering Committee</p> <p>a. Chaired by Addl Chief Secretary/Principal Secretary/Secretary, Education</p> <p>b. Director, SCERT</p> <p>c. State Project Director, SSA</p> <p>d. Members from SCERT</p> <p>e. Member(s) from Department of Education</p> <p>f. Member(s) from Department of Information Technology</p>	<p>a. Review and Approve the operational/procedural aspects of DIKSHA</p> <p>b. Review and Approve budget proposal/s submitted by PMU and provide approval for release of funds</p> <p>c. Review and Approve resource and capacity building plan by PMU and provide approval for release of funds</p> <p>d. Approve the recommended standards, after ensuring that the due processes have been followed</p>
2	<p>Project Management Unit (PMU)</p> <p>a. Chaired by Director, SCERT</p> <p>b. Member(s) from DIKSHA PMU</p> <p>c. Member(s) from DIETs</p> <p>d. Subject Matter Experts (SMEs)</p> <p>e. Other members nominated by chair</p>	<p>a. Constitute working groups for technical aspects and content aspects in the project</p> <p>b. Review draft standard documents prepared by the working groups</p> <p>c. Periodic review of working groups</p> <p>d. Prepare MoM/Action items for periodic review of Steering committee and submit for approval.</p> <p>e. Awareness and promotional activities- Preparation/Submission of budget proposal for implementation of promotional activities</p> <p>f. The chairman of the unit shall report formally to the Steering committee on its proceedings after each meeting on all matters within its duties and responsibilities.</p>
3	<p>Working Groups</p> <p>Content Sub-Committee</p> <p>a. Chaired by SCERT official</p> <p>b. Member(s) to include teachers/SMEs with high pedagogical expertise</p> <p>c. Member(s) to include teachers/SMEs with experience in creating digital content</p>	<p>a. Prepare Project Plan, Issue/Risk log and trackers for monitoring the progress of the project</p> <p>b. Prepare documentation in the areas of QR code solution overview and content pooling, creation and review</p> <p>c. Facilitate QR code identification/placement workshops for SCERT officials.</p> <p>d. Facilitate content creation and curation workshops for the teachers identified by SCERT</p> <p>e. Proceedings of the meetings along with action items shall be circulated promptly within a reasonable time after the meetings to all members of the Committee and, once agreed,</p>

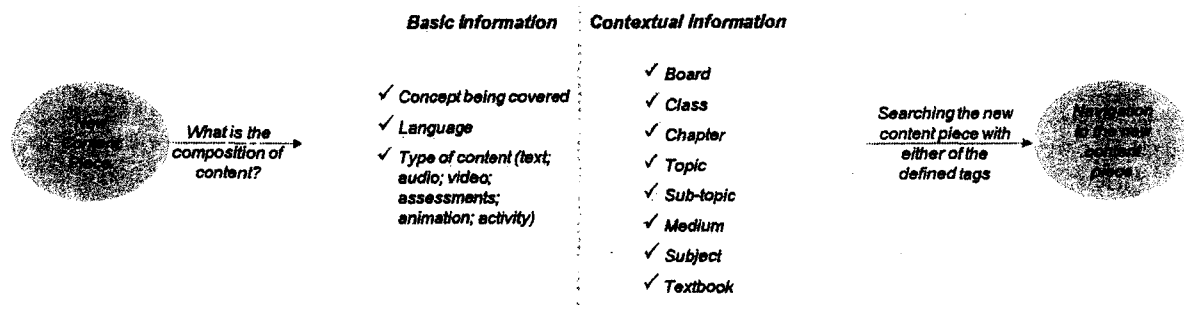
	<p>d. Member(s) from DIKSHA PMU</p> <p>Technology Sub-Committee</p> <p>a. Chaired by SCERT official</p> <p>b. Member(s) from State NIC</p> <p>c. Member(s) from DIKSHA PMU</p>	<p>to all other members of the Steering Committee and Project Monitoring Unit, unless a conflict of interest exists</p>
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1. Tagging framework-Taxonomy

Taxonomy is the overarching infrastructure for tagging and categorizing knowledge in a domain. Taxonomy helps us tag a large range of content. This tagging helps organize content and makes it easy to find relevant content for users. It implies making it easy for the user to navigate to the relevant content or search and find it basis their context and need.

The aim is to provide sufficient information for each content to ensure the same.

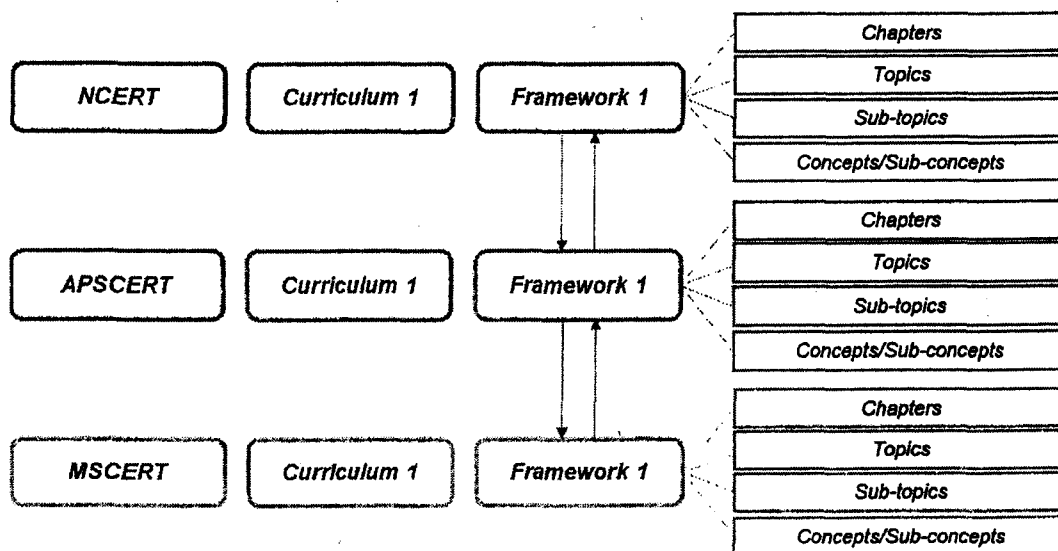
Taxonomy framework defining tags for the new content piece



Importance of Taxonomy

Different states, their SCERTs (known as 'organizations' on DIKSHA) and the adopted boards use different names and nomenclatures while teaching similar concepts. This manifests in the form of different curriculums, different vocabulary and difference in the sequence in which topics are taught (for example, place value is taught in grade 3 in Rajasthan, and in Grade 2 in UP board is a hypothetical example of this). These different curriculums can be detailed out on DIKSHA in the form of different frameworks. The framework will help in tagging the content correctly to its curriculum, making it easily searchable for its users.

Moreover, to ensure that content tagged across different frameworks is still searchable and accessible across the content repository EQUIVALENCE shall be established across different frameworks. The aim of equivalence is to help find relevant content across frameworks and is illustrated with the help of the following figure.



Different aspects of Taxonomy framework

Framework captures relevant information across different categories. The different categories are:

	Framework 1
Content type	Story, Worksheet etc.
Level	Grade 1,2,3
Curriculum	Curriculum
Concepts	Concepts
Keywords	Keywords

1. **Content Type-** Content can be of different types, based on intended usage and audience for the content. For example: Lesson, Worksheet, assessment, lesson plan etc.

2. **Levels-** This covered the sequence in which a framework is divided (E.g. Class 1, 2, 3; Year 1, 2, 3; NSQF Level 1, 2, 3 etc.).

3. **Curriculum-** This captures Boards/ Curriculum Alignment for the framework etc. (NCERT, APSCERT, MSCERT, NSQF etc.). Curriculums are set by organisations like CBSE, NCERT, and NIOS School Education Boards. This covers the total learning experience designed for students by certain institutes- various books, chapters, topics and subtopics followed by a

certain board.

4. **Concepts-** This details the various concepts and sub-concepts being taught under a certain curriculum.
5. **Keywords-** any other relevant words that help make the search and access to content easier are covered here

Benefits of Taxonomy framework

- ✓ Every state's content will be tagged to a curriculum framework based on textbooks and their table of contents.
- ✓ Equivalence will be maintained between two frameworks to ensure that all the content is searchable and relevancy is established. This involves matching concepts and subconcepts across frameworks, so that content which may be relevant for a user, even though in a different framework, is easily searchable.
- ✓ NCERT will act as an alternate for tagging content not linked to any curriculum
- ✓ State and their SCERT can also create their own version of the framework on DIKSHA but should assist in establishing equivalence of their vocabulary with existing frameworks (Where possible) on DIKSHA to enable relevancy and search ability of content.

This requires states to develop their taxonomy framework to tag content in a manner that's it's easy for teachers and learners to find it. If this is done in a way that a teacher or learner is most used to in their day to day life and doesn't involve a significant change in their habit, then it becomes easy for them to find & use content. For example, in a classroom teacher & learner are engaged in the context of the curriculum, textbooks and the topics within the same. If teaching & learning content is organized likewise then finding it becomes easy. Therefore, textbook based taxonomy is being envisioned for the states. The detailed guidelines for the state roll-out are appended in annexure A.

Annexures

Annexure A.State roll-out strategy for Taxonomy

The taxonomy framework of DIKSHA envisions to develop a tagging process for easy search and navigation of content available across country. States have the autonomy and choice to repurpose and extend the taxonomy framework to suit their own needs and purposes.

What do the states have to do to get it done?

To enable the creation, consumption, curation and tagging of digital content and usage of Energized Textbooks, DIKSHA suggests a Textbook based taxonomy Framework for all content.

Capture information from the Textbook based framework

Textbook based framework approach will serve the following purposes:

- ✓ Teachers are familiar with the structure and arrangement of textbooks. Digital content is most useful when it is accessible, in relevance to the topic or chapter being taught.
- ✓ With DIKSHA, Teachers or learners can easily navigate to relevant digital content based on their textbooks. This could either happen through DIKSHA portal/app or by scanning QR code in a textbook.
- ✓ Therefore the aim is to capture the details of the textbook (name, grade, medium, chapter name, topic name etc.) so that digital content can be tagged to these, making discovery easier.

Capture the concepts being covered in the chapters and topics of the textbook

- ✓ Each textbook's chapters and topics cover certain concepts. Each board covers a range of concepts, similar or different from other boards. It is important to capture what concept is being taught through a topic and chapter, to enable discovery of other content which

teaches the same concepts, across boards and languages. This is to enable teachers, parents and states to find relevant content for teaching and learning, across the DIKSHA repository

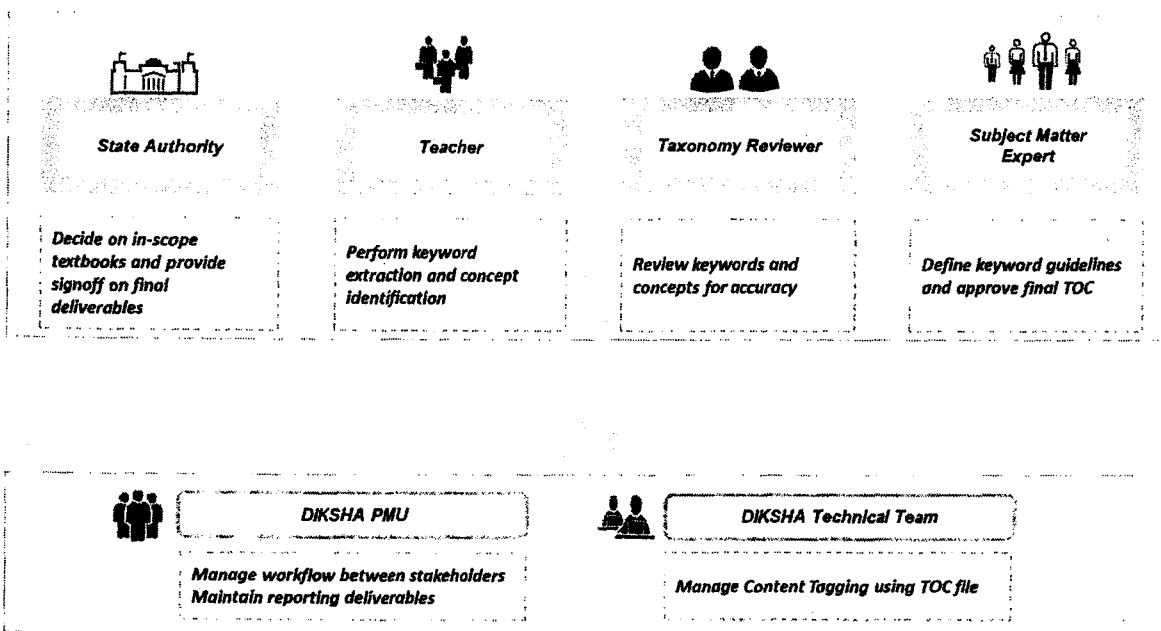
- ✓ The concepts recorded for the textbooks will help serve as a basis to create concept maps for each subject, independent of a textbook. This helps navigating and searching content based on concepts within a given subject.

Due to the different structure and medium of language based subjects (E.g.: Hindi, Tamil etc.) and non- language subjects (E.g. Science, Maths etc.) three scenarios have been outlined.

	Medium	Type of subjects	Example of subjects	Points to consider while developing taxonomy
Scenario 1	English	Non Language subjects	Maths, science Social Science	<ul style="list-style-type: none"> ✓ Utilize concepts provided in the list of concepts ✓ At least chapter and topic level concepts to be provided ✓ Keywords to be provided
Scenario 2	Non-English	Non- Language subjects	Maths, science Social Science	<ul style="list-style-type: none"> ✓ Utilize concepts provided in the list of concepts ✓ Concepts to be provided in the concerned medium and in English ✓ Keywords to be provided in the concerned medium and in English
Scenario 3	All Languages	Language Subjects	English, Hindi, Telugu and other language	<ul style="list-style-type: none"> ✓ Language as subjects cover skills like 'Reading', 'writing', 'comprehension'. etc. These differ from story to story, chapter to chapter. ✓ No concepts applicable, so keywords for each chapter should be rich. ✓ Keywords can include chapter type (story, poem etc), author name, themes, unit number, activities and skills. ✓ Chapter name and Keywords to be provided only in concerned medium.

Taxonomy development process

The state must identify and align its key stakeholders with whom the taxonomy framework is to be developed for the state. The major stakeholders of the roll-out strategy have to ensure that they perform their respective roles/responsibilities as well as work in collaboration with the other actors as illustrated below.



Each of the aforementioned stakeholder/stakeholder group is involved in performing specific tasks for developing the taxonomy framework. The entire process comprises of 4 stages at a high level-

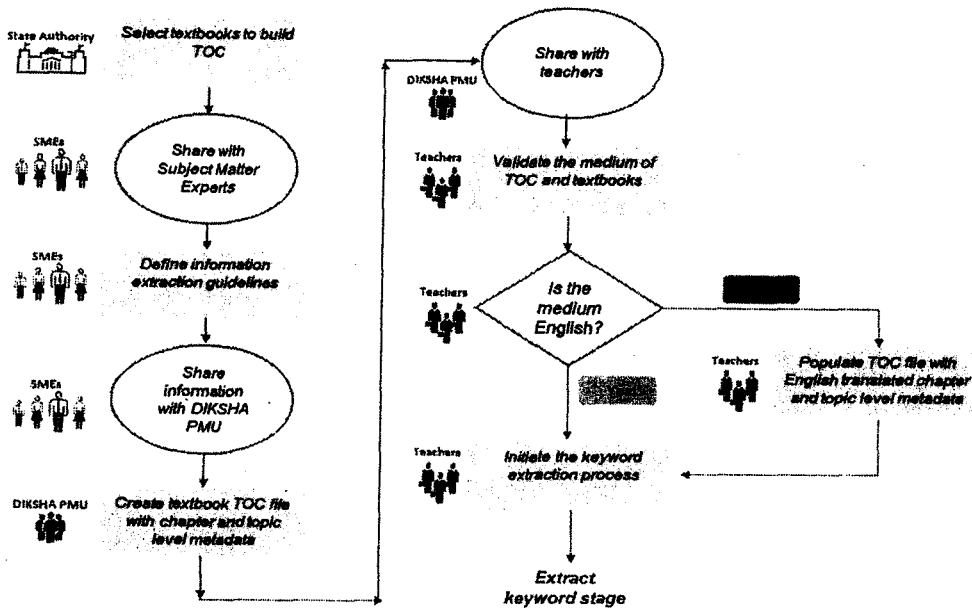
1. Selection of the textbooks, 2. Identification of concepts 3. Extraction of keywords and 4. Final-sign off.

1. Select Textbooks

- ✓ The state authority to identify the textbooks to be covered under the scope of taxonomy framework
- ✓ The textbooks to be selected should ensure coverage across subjects, medium and grade.
- ✓ By the end of this stage, a TOC (Table of Contents) file with list of chapters should be available

The detailed process is illustrated with the help of the following flow chart outlining the steps to be followed along with highlighting the ownership of the stakeholders.

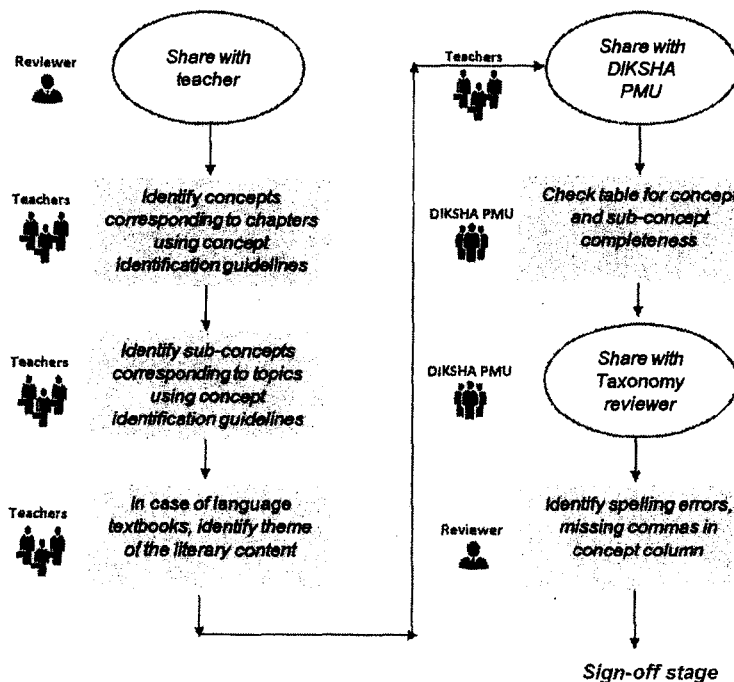
Select textbooks



2. Identify Concepts

- ✓ Teachers will be identifying and mapping concepts relevant to the specific chapters, topics and sub-topics
 - ✓ The deliverable of the stage will be TOC with identified concept names
- Step by step process is detailed below along with the stakeholders involved.

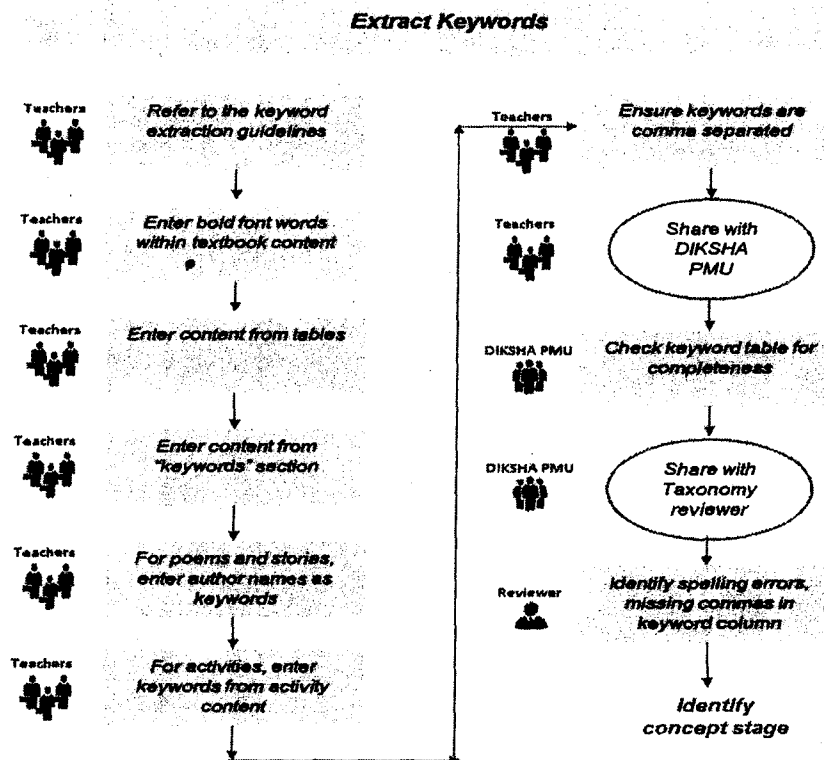
Identify Concepts



3. Extract Keywords

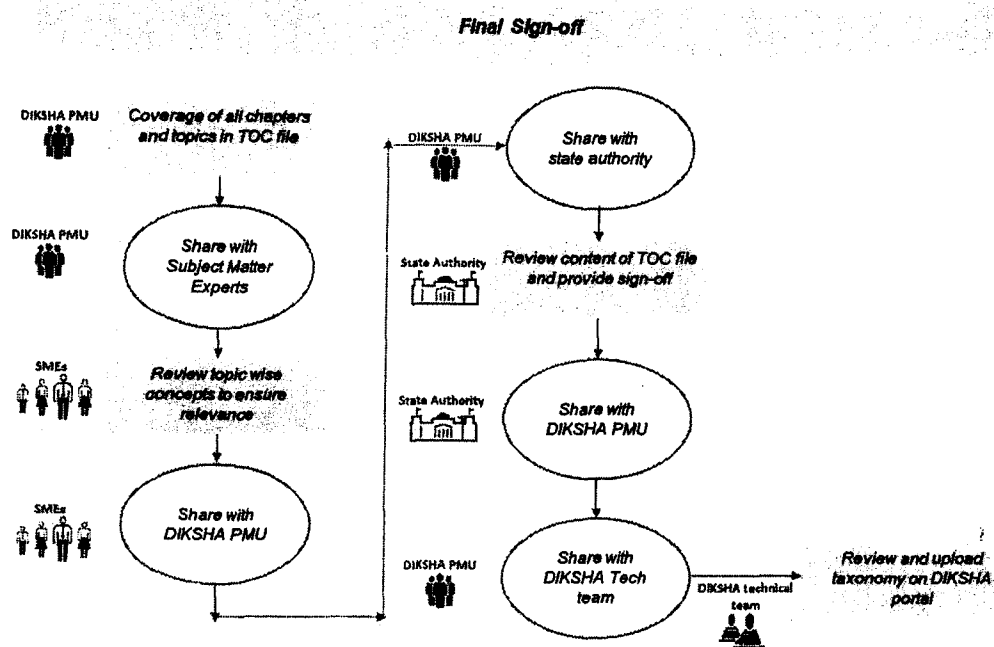
- ✓ Teachers will be assigned the responsibility of extracting keywords from the content using the keyword extraction guidelines
- ✓ The aim is to capture the keywords under each topic, chapter etc. to ensure high quality in discovery when users search for certain topics.
- ✓ The deliverable for this stage will be TOC with keywords

Following flow chart outlines the step by step process of the stage along with highlighting the ownership.

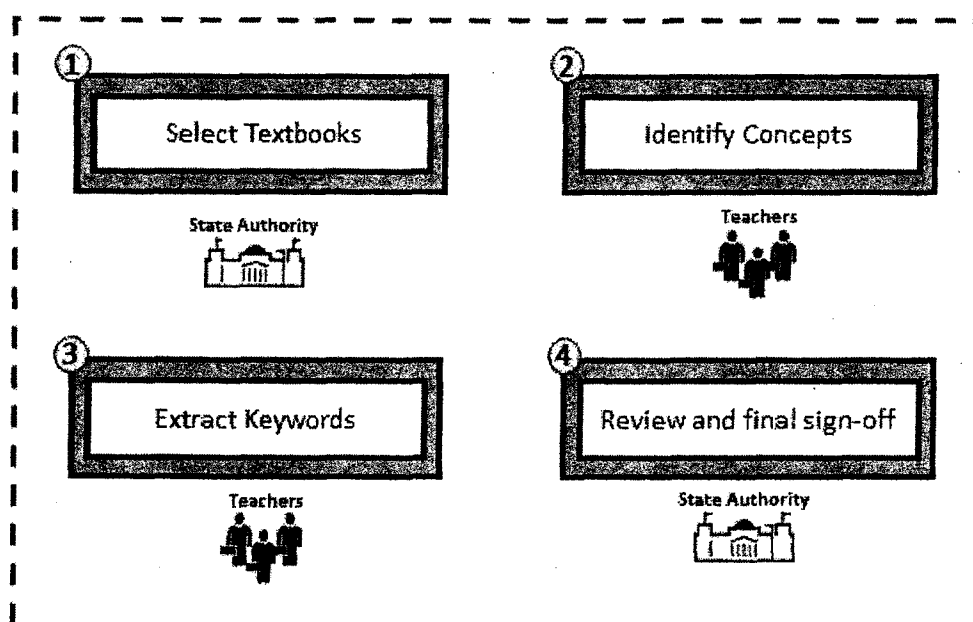


4. Final Sign-off

- ✓ DIKSHA technical team will verify a sample of textbook data and provide feedback, in case it is required
- ✓ State Authority must review the developed TOC file for accuracy and provide sign-off
- ✓ By the end of this stage, the state would have developed an approved TOC with all the required tags



A summary of the sequential order of these steps and the main stakeholders associated have been illustrated in the figure below:



Instructions

This section details out the information to be provided for developing a textbook related taxonomy. Irrespective of the medium and structure of the textbook, following details have to be provided while creating the taxonomy framework

Common section: General Details

COLUMN A

State/Centre Name: Is this taxonomy for the state or for the centre? E.g. Maharashtra

COLUMN B

Type: For all curriculum and textbook framework, please fill K-12.

COLUMN C

Board: Board that the framework, and the textbooks being detailed out, subscribes to. E.g. MSCERT

COLUMN D

Grade: Class/standard/grade for which the textbook framework is being built. E.g.1, 2, 3,etc.

COLUMN E

Subject Name: The concerned subject for which the framework is being developed. E.g. Mathematics

COLUMN F

Medium: The language of instruction for the textbook

COLUMN G

Textbook Name: Provide the name of the textbook here. This needs to be filled in in the medium of instruction

Table 1: Information required across subjects

A	B	C	D	E	F	G
State	Type	Board	Grade	Subject	Medium	Textbook Name (In English)
Maharashtra	K-12	MSCERT	1	Mathematics	English	Mathematics Standard 1
Maharashtra	K-12	MSCERT	8	General Science	English	General Science Book Six

SECTION 1: Non- language Subjects (Maths, Science, Social)

Case 1: English Medium

COLUMN H: Chapter Name

COLUMN I: Chapter-Concept Name

COLUMN J: Topic Name

COLUMN K: Topic-Concept Name

COLUMN L: Sub-Topic-Concept Name

COLUMN M: Keywords/Key Phrases

Table 2: Information to be captured for English medium subjects

H	I	J	K	L	M
Chapter Name (In English)	Chapter-Concept Name (In English)	Topic Name (In English)	Topic-Concept Name (In English)	Sub-Topic (In English)	Keywords (In English)
Words of Comparison	Words of Comparison	Small - Big	Small - Big	NA	Small, Big
Words of Comparison	Words of Comparison	In - Out	In - Out	NA	In, Out
Magnetism	Properties of magnets	Activity	Activity	NA	North-South direction, magnetic attraction, repel, poles, repulsion

Case 2: Other Medium(Non-English), for Non-language subjects

COLUMN H: Chapter Name

COLUMN I: Chapter-Concept Name (In Medium of Textbook)

COLUMN J: Chapter-Concept Name (in English)

COLUMN K: Topic Name (In Medium of Textbook)

COLUMN L: Topic- Concept Name (In Medium of Textbook)

COLUMN M: Topic- Concept Name (in English)

COLUMN N: Sub-Topic Name (In Medium of Textbook)

COLUMN O: Sub-Topic Name (In English)

COLUMN P: Keywords/Key Phrases (In Medium of Textbook)

COLUMN Q: Keywords/Key Phrases (In English)

In case of more Keywords, use additional tab. .

Table 3: Information to be captured when the medium of the subject is non-English

H	I	J	K	L	M	N	O	P	Q
Chapter Name (in medium of textbook)	Chapter-Concept Name (in medium of textbook)	Chapter-Concept Name (In English)	Topic Name (in medium of textbook)	Topic-Concept Name (in medium of textbook)	Topic-Concept Name (In English)	Sub-Topic (in medium of textbook)	Sub-Topic (In English)	Keywords (in medium of textbook)	Keywords (In English)
संख्याज्ञान	संख्याज्ञान	Number Work	सहा अंकी संख्याची ओळख	संख्याचा लहान-मोठे पणा (क्रमसंबंध)	Introducing six-digit numbers	सहा अंकी संख्याचे वाचन, सहा अंकी संख्याचे अंकात लेखन	Six-Digit Numbers	सहा अंकी संख्या, एक लाख, एक हजार, दहा हजार, शंभर हजार	Six-Digit Numbers, One Lakh, One Thousand, Ten Thousand, Hundred Thousand

SECTION 2: Language Subjects (E.g. Hindi, Telugu, Tamil)

Unlike subjects like Maths, Science etc., lessons in the language textbooks (such as English, Hindi, and Telugu) do not correspond to concepts being taught. Lesson in a language textbook typically consists of a poem or story and a set of activities/exercises that help students learn and develop various skills. The activities/exercises usually have a title that might represent the activity being done or the concept that is being learnt. There are no standards in naming of these sections. It varies across boards, classes and languages.

Based on the above, it is clear that the lesson/chapter names and the sections under it do not directly correspond to concepts. Hence, creating and using Textbook TOC is not as straightforward for language textbooks as that for other subjects like Maths and Science. To keep it simple, only the chapter name will be captured for each textbook, along with the keywords for that chapter.

Following are the guidelines to create them:

COLUMN H: Chapter Name in the medium of the textbook

COLUMN I: Keywords/Key Phrases in the medium of the textbook

A	B	C	D	E	F	G	H	I
State/Centre	Type	Board	Grade	Subject	Medium	Textbook Name	Chapter Name	Keywords
Centre	K-12	CBSE	5	English	English	Marigold	Ice-Cream Man	-Add chapter type (story, poem, play, picture etc.) -Add author name -Add available themes -Add other key words from the chapter - Add unit no. x
Centre	K-12	CBSE	5	English	English	Marigold	Wonderful Waste	
Centre	K-12	CBSE	5	English	English	Marigold	Bamboo Curry	
Centre	K-12	CBSE	6	English	English	Marigold	Teamwork	
Centre	K-12	CBSE	5	English	English	Marigold	Flying together	
Maharashtra	K-12	MSCERT	4	हिन्दी	Hindi	भाषा	काबूली वाला	बेटी, काबुली , रबिन्द्र नाथ टैगोर
Maharashtra	K-12	MSCERT	1	اردو	Urdu	حماری اردو	گیارے	گبارا ، دکان

Glossary for Taxonomy

- **Categories-** Grouping of knowledge in the given domain into top level classification. Makes navigation and discovery of knowledge simpler and intuitive. For example, content that teachers can use in classroom is grouped under the grades in which that content is relevant.
- **Concepts-** This details the various concepts and sub-concepts being taught under a certain curriculum.
- **Content Type-** Content can be of different types, based on intended usage and audience for the content. Examples include Lesson, Worksheet, assessment, lesson plan etc.
- **Curriculum-** This covers the total learning experience designed for students by certain institutes- various books, chapters, topics and subtopics followed by a certain board.

- **Domain**-Subject area for education, such as Literacy, or Teacher Education. Different domains have their own set of topics and concepts that learners should acquire to achieve proficiency in that domain.
- **Frameworks**-Frameworks are tags that enable the organization of vocabulary for simpler navigation and discovery. There can be many different ways to organize the knowledge within a single domain. For example, "Place Value" may be categorized under "Grade 1" or "Grade 2" based on the curriculum, or under "Linear Math" based on topical organization. Each way of categorizing the vocabulary tags is called a Framework.
- **Keywords**- any other relevant words that help make the search and access to content easier are covered here
- **Levels**- This covered the sequence in which a framework is divided (E.g. Class 1, 2, 3; Year 1, 2, 3; NSQF Level 1, 2, 3 etc.).
- **Metadata**- These tags enable describing additional detail about the content such as the nature of engagement, or the purpose for which the content should be used. While vocabulary and framework tags allow analysis of content based on the concepts addressed, additional metadata fields' enables analyses of the content beyond the knowledge they contain.
- **Tags**- Keywords that provide additional detail to content, community or people, to enable search and discovery. E.g. all content tagged with the term "NROER" can enable users to discover content that is imported from NROER repository.
- **Taxonomy**- Taxonomy is the overarching infrastructure for tagging and categorizing knowledge in a domain. Taxonomy makes it easy to search, navigate and discover content in the system using different types of categories and tags.
- **Track**- This captures Boards/ Curriculum Alignment for the framework etc. (NCERT, APSCERT, RAJ SCERT, MSCERT, NSQF etc.). Curriculums are set by organisations like CBSE, NCERT, NIOS School Education Boards
- **Vocabulary**- These tags help understand which concepts are addressed by a piece of content. The collection of concepts in a particular domain and their basic metadata such as meaning and translations together form the Vocabulary of that domain.

ANNEXURE-V



National Digital Infrastructure for Teachers

Digital Infrastructure for Knowledge Sharing

Energised Textbooks Toolkit

Executive Summary

Every school going kid in India has access to printed material and that is his/her school textbook. For many teachers across the country, these textbooks are the only resource which can be leveraged as a guide for lesson planning/ teaching/ assessments etc. While the textbook serves many needs, there are certain challenges (as illustrated in the figure below) that are incurred by teachers as well as their students in the present day scenario.

1

The textbook content is not enough for teachers to effectively explain the chapter/topic in class.

4

Students are unable to learn and understand concept/s from the textbook material.

2

Teachers want more effective and interactive means to assess the performance of students.

5

Students need an additional 'self-learning' provision for access to good learning content at their convenience.

3

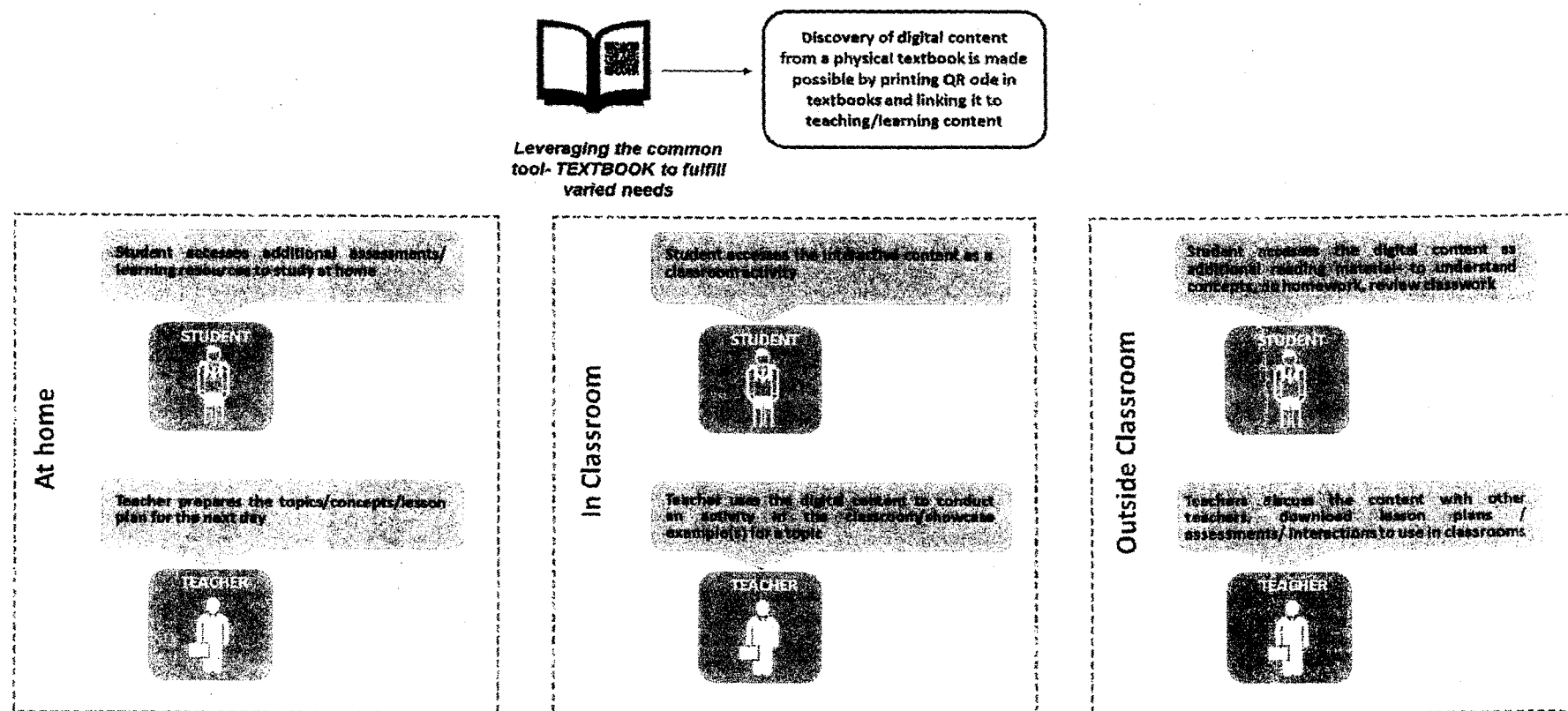
Teachers need additional provisions to effectively remediate the student learning process by leveraging relevant content and employing interactive techniques/activities.

6

Parents also stand to benefit by having access to rich content, which ultimately helps them in guiding their children through these studies.

As part of upgrading the overall experience for students in classrooms, students along with the teachers need to be given access to rich, qualified and illustrative content in addition to the textbooks. Provision of such additional content resources will allow both students and teachers to adequately prepare and also have qualitative takeaways from the classroom sessions. For instance, students can leverage such additional content resources to help them understand subjects and individual concepts better, self-assess their proficiency levels and improve accordingly; thereby enriching their ongoing learning process. Along with external paper-based study resources to aid the learning experience, students and teachers had been increasingly moving towards the digital medium for access

to better quality content over the years. Generally, both students and teachers have to rely on public websites to search and access digital content resources, thereby making the entire process cumbersome and not very 'contextual'. The "Energized Textbooks (ETB)" solution (as illustrated in the figure below using certain scenarios) is designed to address this very specific need and bring about transformative changes to the overall educational experience for all stakeholders involved.



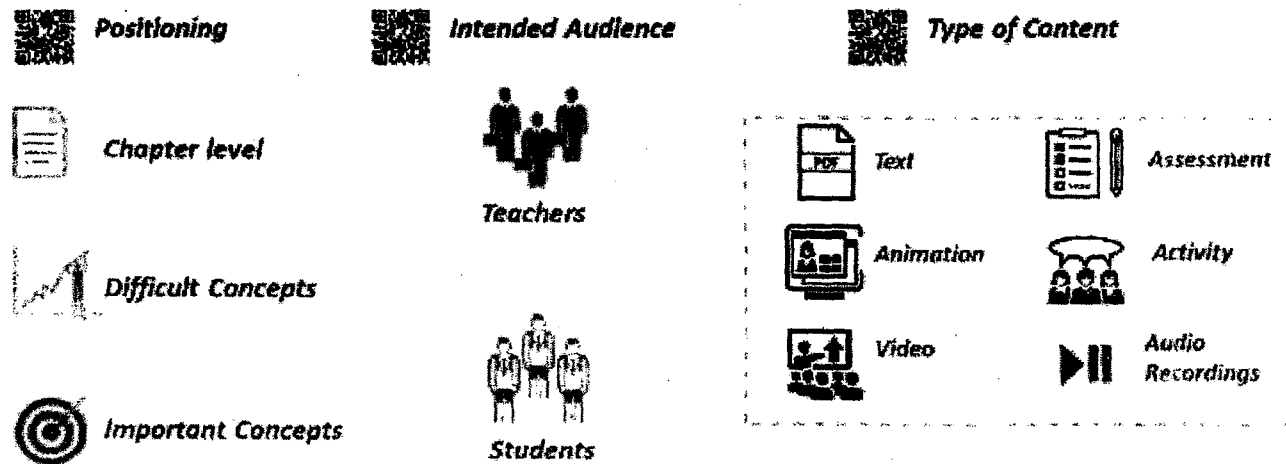
By providing an ability for the teachers to pool and create the relevant learning content for students, the ETB solution facilitates the provision of qualitative content resources in a more 'contextual' fashion. The ETB solution enables this by leveraging QR codes to link aggregated/created digital content with the existing physical textbooks.

This essentially means that QR codes can be printed in the textbooks and linked to digital teaching and learning methods at a conceptual/chapter level. By a simple scanning process via their personal devices (i.e. mobile phones or tablets), all stakeholders can easily access such linked content seamlessly. Unlike URLs, there is no manual typing involved in QR codes which makes it a far more 'error-free' process and ensures uniformity in terms of look and feel. The technical specifications to be considered while printing QR codes in textbooks are detailed in Annexure A.

QR code positioning in Textbooks

To ensure a contextual learning experience for the students as well as the availability of an effective content resource pool for teachers, it's imperative that the positioning of QR codes is identified in a logical way. QR codes can be positioned at a chapter/topic/subtopic level to contextualise the additional content resources better. For e.g., some teachers may want all the additional resources to understand or explain difficult concepts in a specific 'chapter' to be linked to one QR code positioned at the 'chapter' level.

The QR code images are placed at these identified placeholders in the textbooks. The type of content/resources can vary across text (PDF file, PPT), pictures, videos, mind map etc. The following figure illustrates the considerations for positioning of QR codes:



Optimization of QR codes

The QR codes identified could be revisited in order to group and/or remove some of the identified locations, in order to arrive at the optimal number of QR codes that can be affixed in a particular textbook. The following three key parameters need to be assessed for optimizing the number of QR codes

- **Content per QR code:** Content requirement per QR code is directly proportional to the efforts required in pooling and/or creating the content. Textbooks with blank QR codes i.e. no content linked against the QR code will dampen the reliability factor as well as the enthusiasm associated with energized textbooks.
- **Availability of content:** If content (meeting a certain quality standard) can be easily pooled for an identified QR code, the timeframe for linking content to QR codes will be short. However, to create a new piece of content, meeting a certain quality standard, requires approximately 2 days of dedicated effort (basis the data from the various workshops that have been conducted).

- **Number of QR codes per page:** If the number of QR codes per page crosses 2, then the codes should be grouped. Large number of QR codes in a page result in reduced readability/legibility of the page. Phone cameras with low resolution will face issues in scanning QR codes which are placed in high proximity.

Annexure B illustrates the design choices that need to be factored in during positioning of QR codes in the textbooks.

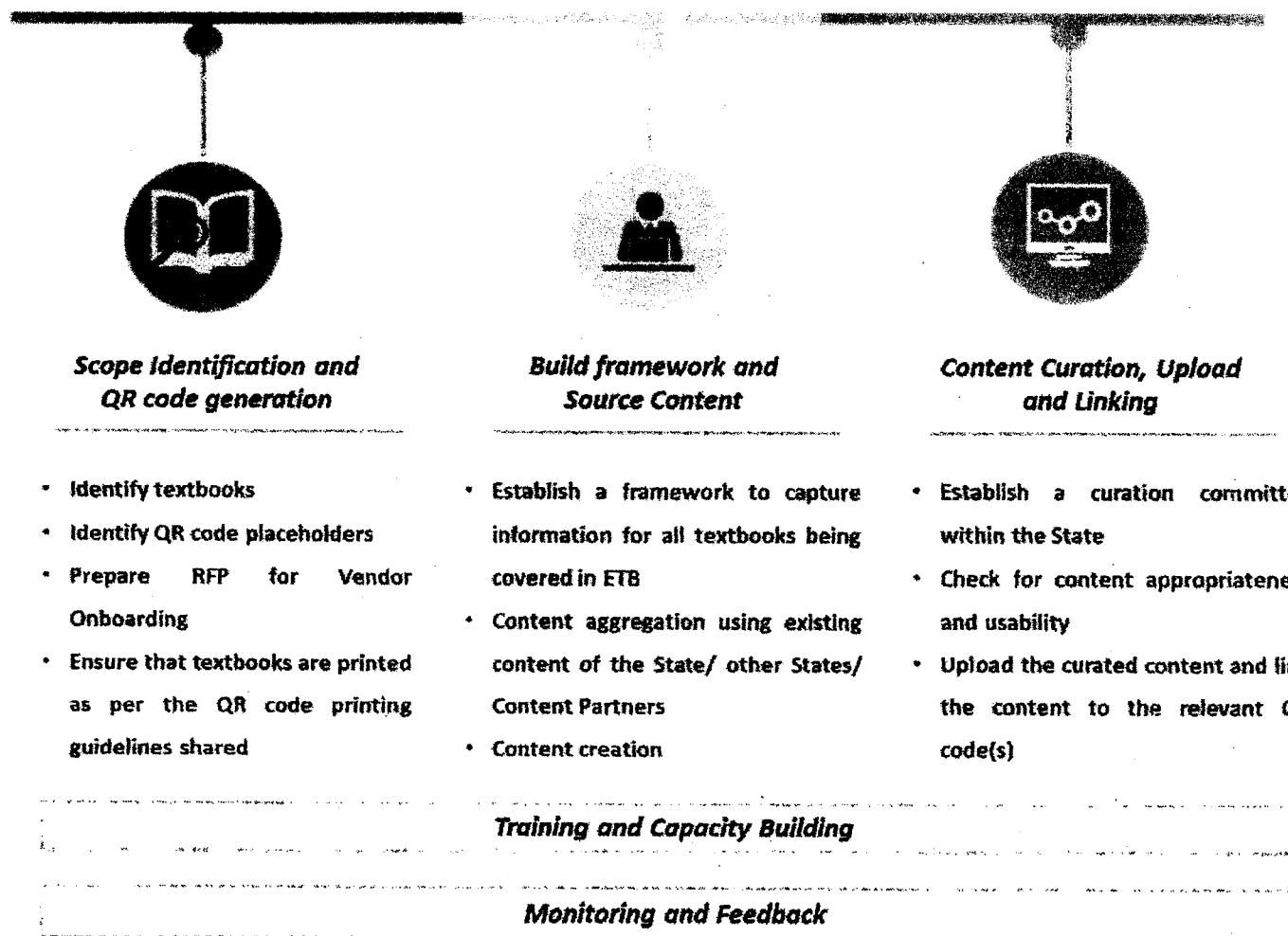
Rollout of ETB in States

The approach for rollout and use of ETBs across the state comprise of the following tasks:

1. ***Scope identification and QR code generation:*** Scope identification will comprise of identification of grades, languages, subjects, users (teachers/students/both), type of content required- classroom resources, explanation videos, lesson plans, teacher instructions etc. Number and placement of QR codes will be identified and finalised before sharing the guidelines and content with the printing vendor/s.
2. ***Build the framework for the textbooks being covered in the Energised Textbooks:*** A framework also referred to as a “taxonomy” has to be established for the textbooks being covered in ETB. This framework will be leveraged for tagging and consequently for easy access and navigation of content which will be linked to the QR codes identified in the textbooks.
3. ***Source content:*** Content curation and linking it to the right chapters as per the textbook table of contents is important. There are various methods through which content can be collated, created, curated and made ready to use- existing content on the internet, content providers/partners who have an interest in sharing their content, content available on DIKSHA through content providers and states, content created previously by expert/technology savvy teachers and content created by teachers using DIKSHA authoring tool/other sources.

-
4. **Training and capacity building:** Conducting workshops (in labs/online trainings) for teachers and/or master trainers on QR code placement, content creation, pooling and curation as well as training teachers on using ETB in classrooms.
 5. **Curation of the collated and created content for linking to Textbooks:** Content is the backbone of the ETB use-case of DIKSHA. It is essential to curate the large amount of aggregated content as well as the content that is created by the teachers/SMEs of a State/UT. Curation process will ensure check on content appropriateness and usability.
 6. **Uploading and linking content to QR codes and Digital Textbooks:** The URL (link) of the curated content will be mapped against the appropriate QR code using the established framework. This mapping exercise will help ensure proper contextualisation of the content with respect to the chapter/topic/subtopics in the textbooks. The complete framework will be used by the DIKSHA team to perform the following activities:
 - **Upload the curated content on DIKSHA:** The mapping provided via the framework will ensure that when a QR code is scanned, only the digital content tagged against that particular QR code will open/play.
 - **Create digital textbooks:** Digital textbooks will be created, wherein, the table of contents for each textbook is available on the DIKSHA portal and against each chapter/topic/subtopic, the relevant digital content is tagged.
 7. **Monitoring and feedback:** As energized textbooks and associated processes get rolled out, they need to be refined for continuous improvement. It becomes imperative to gather feedback and leverage data, tools and reports to analyse the feedback and act on it.

The following figure summarizes the aforementioned tasks:



The DIKSHA ETB vision is a shared digital infrastructure available across the country for use by all key stakeholders - Teachers, Students and Parents. States have the autonomy and choice to repurpose and extend DIKSHA to suit their own needs and purposes. To realise

the vision, the major “stakeholders” of the State rollout strategy have to ensure that they perform their respective roles/responsibilities as well as work in collaboration with the other stakeholders.

Stakeholder	Role/Responsibility	Key Activities
State/UT Team	State/UT team may comprise of the following stakeholders: <ul style="list-style-type: none"> ● SCERT ● Department of Education ● Department of I.T. ● Teachers and Subject Matter Experts 	<ul style="list-style-type: none"> ● Establish the State/UT requirement(s)/priorities with respect to the ETB use-case, encompassing grade(s), subject(s), and medium(s) ● Identification of QR code placeholders ● Preparing RFP for printing of QR code imposed textbooks ● Setting up of Content committee to oversee the content related activities and Technology committee to oversee the technical aspects at the State level ● Identify resources for performing content aggregation, content creation and content curation activities.

Project Management Unit (PMU)	PMU may comprise of the following stakeholders: <ul style="list-style-type: none"> • State defined/assigned PMU • DIKSHA PMU 	<ul style="list-style-type: none"> • Monitoring end-to-end process of ETB rollout in the State/UT • Establishment of a continuous monitoring and feedback framework for communication between the State/UT stakeholders and DIKSHA team • Facilitating/Monitoring activities across- <i>QR code identification, QR code generation, QR code positioning, Content Aggregation, Content Pooling, Content Curation, Content Upload and Content Linking</i>
DIKSHA Technical Team	DIKSHA technical team will comprise of the ETB implementation group from DIKSHA	<ul style="list-style-type: none"> • Generation of QR codes • Sharing of QR codes with the State team

Annexure A- Printing Guidelines for QR code imposed textbooks

The following technical specifications would have to be considered, when printing QR code enabled textbooks

1. ***Gram per square meter (GSM)***: GSM relates to a specific area of paper (1mm x 1mm) and refers to the weight of the paper and consequently the quality of the paper. High quality paper will be less prone to wear and tear over a longer duration as compared to low quality paper; this will ensure that QR code images are not damaged. The GSM values and their respective usage is listed as follows:
 - 40 GSM- Newspaper
 - 60-80 GSM- Textbook
 - 80-100 GSM- Magazines

Recommendation: GSM of the paper being used in textbooks should be 60 or above

2. **Size:** If the user can take the media, such as a textbook, in his or her hands, a QR code of size 20 x 20 mm (0.8 x 0.8 inches) is sufficient. However if the size of a QR code is bigger, it will be readable in bad lighting conditions as well.

- 32 x 32 mm (1.25 x 1.25 inches), excluding quiet zone (the white space included around the QR Code) is the minimum size that guarantees that all camera phones in the market will be able to read the QR codes.
- 26 x 26 mm (roughly 1 square inch), excluding quiet zone, covers 90% of the camera phones in the market today.

Recommendation: Size of the QR code should be more than 25mm, preferably 32mm

3. **Colour:** Insufficient contrast between the foreground and background colour of a QR code affects its scan quality. QR code should be created in a single colour only wherein C: 0, M: 0, Y: 0, K: 100. Traditional black and white QR codes have the most reliable scan quality owing to its tonal contrast of 100%.

Recommendation: Single colour ink should be used to print QR codes, preferably Black (C: 0, M: 0, Y: 0, K: 100)

4. **Resolution:** If the size of the module [the smallest element - black or white square - of the QR code is called "a module"] falls below the resolution limit of the camera, then the device/smartphone won't be able to read the QR code. In terms of image quality, the QR code images should not be stretched or distorted.

Recommendation: To use the PNG format when developing/saving a QR code. PNG is a scalable vector graphic so it suffers no loss when being resized.

The illustration below summarizes the aforementioned printing guidelines for QR code imposed textbooks:



GSM

Gram per Square Meter (GSM) helps measure the quality of the paper. Higher the GSM, heavier is the paper

Recommendation: +50 GSM



Size

A larger QR code is more likely to be readable in bad/low light conditions.

Recommendation: 30-32mm QR code will work with most of the smartphones in market today



Colour

The contrast between foreground and background colour must be large for a reliable scan quality

Recommendation: Create a QR code in black and white, only 1 colour (C:0 M:0 Y:0 K:100)







Resolution

If the size of the modules fall below the resolution limit of the camera then the QR code won't be able to be read by the device

Recommendation: PNG images with up to 3,000pixels

Annexure B- QR code positioning

There are certain design choices that need to be factored in when optimizing the number of QR codes and their positioning. The following figure illustrates the design choices and the pros and cons corresponding to the design choices:

 <i>Why not have QR codes for every concept</i>	Pros: <ul style="list-style-type: none">• Will improve/facilitate learning <hr/> Cons: <ul style="list-style-type: none">• Effort input increases to create the content• Too many QR codes can make the book visually messy
 <i>Why can't I have one QR code per chapter</i>	Pros: <ul style="list-style-type: none">• Structural/visual layout across chapters of the textbooks remains standardized <hr/> Cons: <ul style="list-style-type: none">• The student might not be able to relate the additional content to a particular topic/sub topic of the chapter• It can impede contextual learning for the student
 <i>Why not put the QR code now and figure out the content aspect later?</i>	Pros: <ul style="list-style-type: none">• If the content is easily available/can be easily developed, it's a time saving activity to put all the QR codes first and then think about the content. <hr/> Cons: <ul style="list-style-type: none">• If the effort estimated (for pooling/developing content) is wrong, it would result in no content linkage ; blank QR codes.
 <i>Can I have separate content for teacher and students across all QR codes?</i>	Pros: <ul style="list-style-type: none">• Improves audience targeting <hr/> Cons: <ul style="list-style-type: none">• Increased effort required to develop/pool content• Admin overhead increases

Annexure C- Guidelines on Content Curation

An indicative Checklist for Content Appropriateness:

Guidelines for Content Curation	
1	Factually Correct Concepts and procedures that communicate the truth and is concerned with actual details rather than personal interpretations
2	Hate Speech By words either written or spoken or by signs or by visible representation or otherwise promotes or attempts to promote feelings of enmity, hatred or ill-will against persons - Caste, Class, Tribe, Race, Ethnicity, Sex, gender, or gender identity, National origin, Religious affiliation, Sexual orientation, or Disabilities or diseases
3	Sexually explicit content Pornography, Explicit text/images/illustrations/sounds of sexual content, Descriptions of sexual acts
4	Sexual violence and exploitation

	Includes sexual exploitation of minors, and sexual assault. Or Photographs/ Illustrations/videos depicting incidents of sexual violence
5	Nudity and Vulgarly It would mean displaying genitals, breasts or focusing in on fully exposed buttocks. May allow depiction of body parts if it isn't gratuitously graphic and if it is educational, documentary, scientific, or artistic - paintings, sculptures, and other art that depicts nude figures if that content is posted for educational purposes. Providing context will help users determine the purpose of the content/asset. Degrading or denigrating women in any manner. Vulgarly, obscenity or depravity. Dual meaning words as obviously cater to baser instincts.
6	Violence Promoting, encouraging, supporting, praising, or condoning violent actions, activities and behaviour - verbal, physical or emotional. Threatening or inciting others to commit acts of violence. Expressing support or praise for groups, people that are involved in the violent or criminal behaviour
7	Discrimination and Bullying or encouraging such behaviour. <i>Targeting individuals with the intention of degrading or shaming them. Illustrations or Images altered to degrade individuals. Photos or videos of physical or verbal bullying</i> Sharing personal information or harassing people Repeatedly targeting other people with unwanted requests or messages.
8	Harmful or dangerous content Content that intends to incite violence or encourage dangerous or illegal activities that have an inherent risk of serious physical harm or death. Encourage dangerous or illegal activities for instance - performing stunts, high risk activities, choking games, drug use, or other acts where serious injury or harm may result. A content that depicts dangerous acts

	may be allowed if the primary purpose is educational, documentary, scientific, or artistic (EDSA), and it isn't gratuitously graphic.
9	Involvement of children Involving children in violence as victims or perpetrators or as forced witnesses to violence, or showing children as being subjected to any form of child abuse. Depiction of violence, cruelty and horror, scenes of violence primarily. Cruelty to, or abuse of animals.
10	Substance Abuse Images/text/ illustrations have the effect of encouraging, justifying, glorifying, glamorising alcohol drinking, drugs and substance abuse; consumption of tobacco or smoking.
11	Defamation Visuals or words contemptuous of racial, religious or other groups. Visuals or words which promote superstition, communal, obscurantist, anti-scientific attitude. Visuals or words involving defamation of an individual or a body of individuals. Abuse or ridicule of people with disabilities (physical or mental).
12	Sensitive to Children with Special Needs Sensitive to and usable by children with special needs
13	Sensitive to Environmental Concerns Visuals or words encouraging, justifying, glorifying, glamorising environmental damage or lack of sensitivity to environment

An indicative Checklist for Usability:

Checklist for Usability	
1	Visual Clarity Text Size and font should be readable on screen. No overlapping of text and images/ lines are being cut by phone edge. Text is not getting covered by image/ navigation or submit buttons, is legible. Not too much text in one screen.
2	Technical Experience: Audio/video plays in the content. Easy to navigate through. Does not hang/free from technical glitches. Content is downloadable easily.
3	Language: Language used in text, audio, video must be appropriate, simple and easy to understand and conveys the message.

4	Completeness No blank pages. No missing images in pages and questions
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An indicative Checklist for Discoverability and Relevance through Tagging:

An indicative Checklist for Discoverability and Relevance through Tagging	
1	Title: Short, succinct and appropriate content title
2	Appropriate description: Synopsis of content, what can be done with it - hotspots, answer questions, what is the learning objective e.g. learning vocabulary, practice addition, teacher instructions

3	<p>Tagging to Curriculum :</p> <p>Tagging the content to appropriate grade, medium, subject, topic and subtopic.</p>
4	<p>Tag all appropriate keywords:</p> <p>Keywords improve discovery of the lesson by other users. Include objects, places and things used in the content in the list of keywords. If content is in a regional language, transliterate it's title to English and add to content (English is the top language for search of content)</p>
5	<p>Spell Check:</p> <p>Ensure words are spelt correctly</p>

Guidelines for Video Content on DIKSHA

I. TYPE OF ASSET

A. Video ☐

B. Slide Show ☐

C. Animation ☐

D. Interactive ☐

II GUIDELINES: Please mark an X if the parameters will be met; NA if not applicable

Hygiene factors	X
Content does not have any factual errors	
Content is free from technical glitches	
Audio/Video is clear and in sync	
Content is not derogatory	
Content does not violate any IP rights or licencing agreement usage restrictions	
Technical Aspects	
Video content or animation should be between 1-7 minutes long	
Slide show must have regular intervals (ideally every 2-3 slides) for teacher to pause and engage students in an activity or question	
Slide show should not exceed more than 15 frames/slides	
Content can easily load on a mobile phone	
Content should not be a digitized version of hard-copy content e.g. PPTs, or pages of a textbook in video mode.	
Pedagogical Aspects	
Content should have an introduction, and learning objectives stated at the beginning.	
Learning objectives to be aligned with grade-specific National Curriculum Framework (NCF) syllabus and learning outcomes	
Content should, whenever relevant, refresh the previous knowledge of learner required for the targeted learning topic.	
Content should be logically organized and move from simple to complex, known to unknown, concrete to abstract and specific to general	
Content should integrate real-life examples related to the targeted topic and attempts to generate interest	
Content should pose open-ended questions to learners and not simply supply answers.	
Content addresses the application aspect of the targeted topic	
Content addresses misconceptions	
Content explores multiple aspects of a topic	
Time to explain concepts is adequate	
Content lends itself well to active discussion/engagement versus passive consumption	
Content takes into account local context – is rooted in local context – language, images, concepts	
If content is interactive, it provides feedback to the learner	
Content closes well (video has at least one of these elements) - suggestions for activities - resources suggested to deepen understanding - open ended questions to ponder - recap	
Production aspects (for videos recorded on phones)	

Guidelines for Video Content on DIKSHA

Video should be recorded in landscape mode	
Video should be recorded using the back camera	
Subjects should not be lit from behind	
Content does not have distracting elements – like loud background music, too much animation etc.	
Usability Aspects	
Content lends itself well to dubbing or subtitling	
Appropriate instructions for content use are built into the content	

Guidelines for Lesson Plans

- Your contributed lesson plan should be mapped to a chapter mentioned in the table of content of the selected book in the contribution tool. In case, you have more than 1 lesson plan for that chapter, please upload all against the same topic.
- A Lesson Plans should have a minimum of clear objectives, "how to" teach and practice questions/assessments.
- Remove any external web-links that may be present in the lesson plan.
- Remove personally identifiable information like name, address, phone number, email from the lesson plan.
- In the practice/assessment section in the lesson plan, please include the questions directly in the lesson plan and not references to books, documents or worksheets that contain the question. (e.g avoid terms like see spiral 1, refer textbook pg 2 , Ex 1.5 Q3 etc.)
- As you start contributing your lesson plan, please have a look at few samples below:

Sample Lesson Plan 1 : <https://bit.ly/2XOQPVp>

Sample Lesson Plan 2 : <https://bit.ly/2vwduJT>

Sample Lesson Plan 3 : <https://bit.ly/2Vukw0G>

Guidelines for Explanation Content

- Content should be mapped to a chapter mentioned in the Table of content of the selected book in the contribution tool.
- If you have more than one content for the chapter, please upload them too.
- A content should show simple explanation of the topic/concept and which can be consumed by the teacher or the student to learn the topic/concept in a simple way.
- Data from digital learning on DIKSHA has told us that students and teachers prefer videos over documents. In case, you are not able to create videos , but have documents(.doc) or presentation(.ppt) instead, you can also upload these converted in the pdf format.
- For video content, it is recommended that the length of the video is preferably under 10 minutes.
- As you start contributing content , look at some of the reference content available below:
 - Sample Content 1: <https://bit.ly/2ZF53dk>
 - Sample Content 2: <https://bit.ly/2PvYyVm> (Video)
 - Sample Content 3: <https://bit.ly/2Wd9hqn> (Video)
 - Sample Content 4: <https://bit.ly/2VDOC1T> (Video)
 - Sample Content 5: <https://bit.ly/2NSVWCE> (Video)

Guidelines for Experiential Content

Experiential content:

1. What is an experiential content?

An experiential content contains a real-life example of a concept that is being taught in a chapter. It allows students to actually experience or practice the theory, concepts and skills, learnt in the real-world.

Experiential learning connects those concepts in the textbook which are abstract and ambiguous, with incidents in real life, to help students learn them better as real life examples are familiar and tangible. With it, one can explain concepts through common occurrences that we can see all around us which helps make the ideas more concrete to students. Seeing the textbook in the world around them helps interest them in the content. Experiential learning can be done when examples of real experiences, thoughts and ideas are tied to content in the textbook. It essentially means to view the curriculum through the lens of lived experience.

2. Importance and uses

For early grade learners experiential content helps them to make sense of the world around them as they pick up and understand the scientific principles behind different phenomena and are able to relate them to topics they study.

It is of particular importance for secondary students, who know and have much more life-experience. The secondary grade students can be asked to reflect upon their observations and life-experiences and draw upon that understanding to the topics being transacted; practice what they learn in their daily lives' transactions and interactions. This could be a part of *reflective pedagogy*.

Also, for some subjects such as Mathematics topics tend to become abstract in the secondary grades (such as algebra) and hence difficult for students to relate immediately. Subjects such as language requires a lot of practice beyond the textbooks such as reading (newspapers, magazines, books) and writing (voluntary creative writing, formal letters). Experiential content can be very useful in such cases.

3. How does it look for different subjects (Sample Content)

- Science
- Math
- Language
- Social Science

Data on digital learning from DIKSHA has told us that students and teachers prefer videos over documents. Though, it is not necessary that the content should only be a video, if one thinks that the content can be delivered better via any other format (ppt, doc, etc), it can be created on related tool too.

4. Guidelines

- An experiential content contains a real-life example of a concept that is being taught in a chapter. For example:
 - Languages: A morale of a story or a poem can be used to ask how students would apply the same in real life
 - Social Studies: Talking about certain events, phenomena or human-actions that have happened in the past that led to what we see today.
 - Math: A real life application of a concept, formula, theorem or problem.
 - Science: A real-life application/demonstration of a concept.
- In case of a video, the recommended length of an experiential content should be less than 10 minutes.
- Each chapter can should contain a minimum of 1 experiential content.
- Data on digital learning from DIKSHA has told us that students and teachers prefer videos over documents. In case, you are not able to create videos, but have documents (.doc) or presentations (.ppt) instead, you have to convert them into a .pdf format and then upload.
- As you start contributing your experiential content, please have a look at a few samples below:
 - Sample 1 : <https://bit.ly/2IOB0ea> (Video)
 - Sample 2 : <https://bit.ly/2PxMm6F> (Video)
 - Samepl 3: <https://bit.ly/2ZFZZVT>

Guidelines for Curiosity Content

Curiosity Question as a content:

1. What is a curiosity question (aka thought provoking question)

Question that help a teacher engage the classroom in a discussion by making their students explore, think, reflect and develop an interest in the topic being taught. It gives the teacher an opportunity into exploring daily life phenomena within the concept in the lesson.

Examples: Have you ever wondered how does a torch work, what makes an electrical bell sound and how does telephone, radio, television and computer work?

Here the teacher has the opportunity to inspire children into exploring scientific principles in various appliances and scientific phenomena of daily life in an interesting manner.

2. Usefulness and purpose

Curiosity Questions leverage the 'natural learner' (NCF, 2005) behaviour of the students and makes them pause and think about things, phenomena they witness every day in their lives and yet may not know the 'Why' and 'How' of the same.

Curiosity questions can act as a **Hook and a way of introducing** a chapter, topic or a concept.

Example: Teacher: You all have seen the sun at different times of the day. Could you tell me why the colour of the Sun looks different at different times of the day i.e. Red in the very early morning; Reddish Orange a little later; Yellow at noon and afternoon and again red in the evening?

Though, these type of questions can be asked at different times during the class when teacher intent to make student reflect on something they will be learning and the reflecting will help them connect better and deeper with the topic.

3. Curiosity Question as a content

Content has 2 parts:

1. **The question:** An open ended question that drives curiosity with the classroom or a child and makes them reflect on how concepts in the book are linked to daily life phenomenon.
2. **Answer Guide:** It contains some probing questions which teachers can ask in the classroom to drive the reflection process and push students to think deeply.

See example below:

Chapter 6: Life Processes, Subject: Science, Class: 10

Question:

How do we tell the difference between what is alive and what is not?

Answer Guide:

Think about:

1. If we see a dog running, or a cow chewing cud, or a man shouting loudly on the street, we know that these are living beings. What if the dog or the cow or the man were asleep? We would still think that they were alive, but how did we know that?
2. How do we know if plants are alive? Do colours of plants tell us anything?
3. Are there things beyond movement that can be used as evidence for being alive?
4. How do we know if really tiny objects like bacteria or virus are alive?

4. How does it look for different subjects?

- **Languages:** Exploring a character's emotion or morale in a story and asking what a student might do in a similar situation or how it made them feel?
- **Science/Geography:** Observing certain natural phenomena or other situations that occurs in daily life and why it happens?
- **Math:** Applying concepts learnt in a real-world setting. For example, asking students to estimate the length of a door using their hands.
- **History:** Reasoning why a certain situation may have occurred in the past and how that has influenced present day or what a student might do differently in a situation from the past?

Note: Sometimes, one may think that the same question which was asked for the curiosity purpose can be used again for other purposes like "check for understand" and/or as "practice questions". Though, the only difference here will be the "intent" of asking the question and the "expected response" by the student. Let us quickly look at an example below:

Example: *Could you tell me why the colour of the Sun looks different at different times of the day.*

When the intent of the teacher is to make students think and generate interest in the topic even before teaching the topic, then this becomes a curiosity question. The expected answer here will **not be** the actual answer i.e because its short-wavelength colors are scattered out by the Earth's atmosphere, but at a very broader level where students are thinking and making guesses or may be coming with more questions, etc.

When, the intent of the teacher is to check if students have understood the concept around "why the colour of the Sun looks different at different times of the day" and the expected response is to get the

actual concept/process articulated by the student, then this becomes a “check for understanding question” and/or “practice question”.

4. Guidelines

- A curiosity question is designed to help teachers engage the classroom in a discussion by making their students explore, think and reflect.
- Curiosity questions can are always connected to a students real-life context, and could be used to explore and discuss certain phenomena, situations and emotions. By subject, examples of this may include:
 - Languages: Exploring a character’s emotion or morale in a story and asking what a student might do in a similar situation or how it made them feel?
 - Science/Geography: Observing certain natural phenomena or other situations that occurs in daily life and why it happens?
 - Math: Applying concepts learnt in a real-world setting. For example, asking students to estimate the length of a door using their hands.
 - History: Reasoning why a certain situation may have occurred in the past and how that has influenced present day or what a student might do differently in a situation from the past?
- Answers to a curiosity question need not be definite and can remain open-ended.
- When providing answers, bullet points on how one can think about the answer is sufficient. There is no need to write an elaborate answer.
- Each chapter can should contain a minimum of 1 curiosity question.
- As you start contributing your curiosity questions, please have a look at a document that contains a few questions created:
 - Sample 1 : <https://bit.ly/2GFKgOB>

DIKSHA is an open education platform which promotes and encourages free use and sharing of content. Therefore, all content on DIKSHA is governed by the Creative Commons framework of licensing which re-affirms the principles of openness. Content on DIKSHA can be contributed under the are (i) Attribution 4.0 International (CC-BY (4.0)) license, or (ii) Attribution-ShareAlike 4.0 International (CC-BY-SA (4.0)) license. CC-BY 4.0 allows for content to be replicated/adapted (for translation into other languages, adding subtitles etc.) so long as credit is given to the author of the original content. CC-BY-SA (4.0) requires both credit to be given to the author and distribution of the adapted work under the creative commons framework.

अनीता करवल, भा.प्र.से.
अध्यक्ष
Anita Karwal, IAS
Chairperson



ANNEXURE - VII
राष्ट्रीय अध्यापक शिक्षा परिषद्
(भारत सरकार का एक सांविधिक निकाय)
NATIONAL COUNCIL FOR TEACHER EDUCATION
(A Statutory Body of the Government of India)

D.O. No. F. NCTE-Acad024/7/2017-Acad-HQ-Part(I)
08th November, 2018

Dear Sir / Madam,

As part of the DIKSHA initiative, you are aware that DIKSHA is increasing its footprints across the nation with its Teaching and Learning Vertical and Content Creation Platform for Teachers being adopted by more than 25 states. Even the other verticals of DIKSHA are evolving with roadmaps for each vertical being planned. These verticals will together help in ensuring learning outcomes to be achieved by students and teachers.

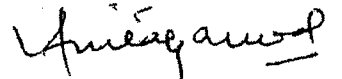
2. The adoption of DIKSHA and its verticals is highly dependent upon the availability and accessibility of relevant content. Content is the backbone of teaching and learning, hence it is required that high quality digital content is developed as per the needs of the teachers and learners.

3. With reference to the steering committee meeting held on 26th October, 2018 chaired by NCTE Chairperson, we request you to undertake the review all your existing content on DIKSHA for errors / mistake / non-conformity with curation and Taxonomy Guidelines and consequently sign and send the 'Self Declaration and Certification for Existing Content on DIKSHA' certificate (refer Annexure A) to NCTE latest by 30th November, 2018.

4. In case of any clarification, you may contact Saurabh Chopra at saurabh@teamdiksha.org or Sh. Sanjay Awasthi, Member Secretary, NCTE at ms@ncte-india.org

Best wishes,

Yours Sincerely,


(Anita Karwal)

To,

The Director,
State Council of Educational Research and Training
JBTC Campus, Nishat Ganj Lucknow,
Uttar Pradesh - 226007

हंस भवन (विंग-II), 1, बहादुर शाह ज़फर मार्ग, नई दिल्ली-110002

Hans Bhawan (Wing-II), 1, Bahadur Shah Zafar Marg, New Delhi-110002

Telephone: +91-11-23370114 / Fax : +91-11-23370116 / Email: cp@ncte-india.org

Website: www.ncte-india.org

Self-Declaration and Certification for Existing Content on DIKSHA

Issued by Content Contributors for contributing content on DIKSHA – the National Teacher's Portal of the MHRD

1. Definitions

- a. Content Contributor - Any individual, organization or institution who is contributing teaching and learning content to the DIKSHA platform.
- b. DIKSHA - Digital Infrastructure for Knowledge Sharing (the national teacher platform) of the NCTE.
- c. NCTE - National Council for Teacher Education
- d. MHRD - Ministry of Human Resources Development, Government of India.

2. Content Contributor details and declarations

- a. This declaration, certification and agreement is issued by _____ (name, address, email id, ph number and description (hereinafter referred to as "Content Contributor"). The Content Contributor has uploaded and made available their teaching and learning content to the DIKSHA platform and its users. The Content Contributor shall abide by all the rules, principles and terms of the DIKSHA platform.

3. Content Contributor Self-Declaration and Certification

- a. The Content Contributor hereby declares and certifies:
 - i. The Content Contributor has thoroughly scrutinized the Contributed Content they have contributed to the DIKSHA platform.
 - ii. The Contributed Content is technologically compatible to be uploaded on DIKSHA platform.
 - iii. The Contributed Content conforms in its entirety to the curation and taxonomy guidelines/norms and other parameters provided by NCTE.
 - iv. The Contributed Content does not violate rights of any third parties including Copyright. In case of any violation, the entire responsibility whatsoever will lie with the Content Contributor.
 - v. The Content Contributor has provided content to the DIKSHA platform and its users pro-bono and as per the creative commons license framework recognized by the DIKSHA platform.
 - vi. If the Content Contributor makes any modifications, deletions, additions or any other form of amendments to the Contributed Content after it has been hosted on DIKSHA, for whatever reason, the Content Contributor shall issue a fresh self-declaration and certification.
 - vii. The Content Contributor takes full responsibility for any errors or discrepancies or mistakes in the Contributed Content and attributions issued by the Content Contributor and undertakes to rectify the same

upon becoming aware of such errors or discrepancies or mistakes or upon being notified of the same.

4. Further Agreements - The Content Contributor further understands and agrees that :
- a. The Content Contributor has authorized the DIKSHA central team/SCERT/SIE (of State wherever relevant)/Project Management Unit to publish the Contributed Content on DIKSHA and in the public domain to make available to users of DIKSHA without any restrictions.
 - b. The Content Contributor nominates the following person(s) as authorized persons responsible for addressing and taking care of public feedback, suggestions with regard to any errors or discrepancies or mistakes in the Contributed Content (*Instruction nominate 2 people. Individuals can nominate themselves*)
 - i. Name _____
 - ii. Designation _____
 - iii. Email id _____
 - iv. Address _____
 - c. In the event of a breach of any of the statements in this certificate, the Content Contributor undertakes to address any issues immediately and recognizes that the NCTE shall take appropriate remedies to address the breach including removal of Contributed Content from the DIKSHA platform as per guidelines to this effect.
 - d. The NCTE as the sponsor of the DIKSHA platform shall host the DIKSHA platform in a manner deemed appropriate and shall take such action in the interest of the DIKSHA platform and its users including removal of Contributed Content from the DIKSHA platform for violation of content guidelines of the platform as they deem necessary.

Name of Authorized Signatory

Designation.....

Signature.....

Stamp.....

Date.....

Place.....



ANNEXURE - IX

Teacher Handbook



Secondary Grade
6 - 10



Preface

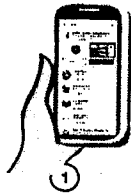
This Teacher's handbook provides material to help teachers with Teaching-Learning Content and Courses on Professional development.

This book consists of QR codes linked to content from grades 6 to 10 for English, Hindi, Math, Science and Social Science. The content is organized like a textbook with all the topics to be covered in a particular grade and subject. The content will enable a teacher to:

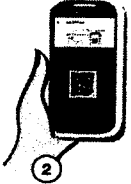
- Teach more effectively by consuming Lesson Plans, hardspots and interactive videos on teaching.
- Make students Practice by consuming questions and exemplary answers for each topic.
- Make students learn better by showing them videos on explanation of a topic and experiential learning linked to real life application.
- Courses that will support in your holistic development as a teacher.

Apart from these, additional resources of teaching and pedagogy are also linked for each topic which can complement as you teach in your classroom or prepare them for exams.

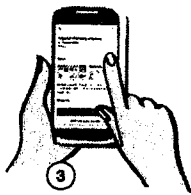
How to Use



Download DIKSHA App
from Playstore



Point the device and
focus on the QR code



Download the content and play



Table of Content

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Energised Textbooks

Grade 6

Subject

Mathematics



Subject

Science

Subject

English



Grade 6

Subject
Hindi



Subject
Sanskrit

Subject
Social Studies



Grade 7

Subject
Mathematics



Subject
Science

Subject
English



Grade 7

Subject
Hindi



Subject
Sanskrit

Subject
Social Studies



Grade 8

Subject

Mathematics



Subject

Science

Subject

English



Grade 8

Subject
Hindi



Subject
Sanskrit

Subject
Social Studies



Grade 9

Subject
Mathematics



Subject
Science

Subject
English



Grade 9

Subject
Hindi



Subject
Sanskrit

Subject
Social Studies



Grade 10

Subject
Mathematics



Subject
Science

Subject
English



Grade 10

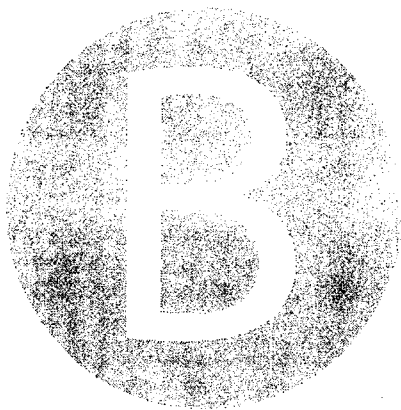
Subject
Hindi



Subject
Sanskrit

Subject
Social Studies





**Professional Development
Courses**

Application of Mathematics

Course Name

Mathematics 1



Purpose : To Learn how to teach Algebra
with real life application.

Course Name

Mathematics 2



Purpose : To Learn project based learning
can happen with Mathematics topic.

Course Name

Mathematics 3



Purpose : To Learn how to teach Algebra
with real life application.

Pedagogy

Course Name

Pedagogy 1



Purpose : To Learn how to effectively do "Check for Understanding"

Course Name

Pedagogy 2



Purpose : To learn how to manage behaviour in classroom

Course Name

Pedagogy 3



Purpose : To Learn how to lesson plan by 5E pedagogy.

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