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Guide For DIKSHA Implementation in Schools

ICT India Project Working Paper #50

Anchal Sharma

June 2021



Table of Contents

Abstract	3
Introduction	4
DIKSHA Platform	5
Objective	6
Features	6
Expected Outcome	6
Infrastructural Requirements	7
Compatible Devices	7
Internet Connectivity	8
Energized Textbooks	8
Installing and registering on DIKSHA	10
Installing the DIKSHA App	10
Registering on the DIKSHA platform	11
Capacity Building of the Teachers and School Leaders	16
NISHTHA Training	18
Roadmap for States in implementing DIKSHA	20
Monitoring and Support	21
Learnings from various states adopting DIKSHA	23
Uttar Pradesh	23
Maharashtra	23
Tamil Nadu	23
Gujarat	23
Need Assessment Study of the Schools	24
Critical Steps in the Implementation	24
Bibliography	25

Abstract

In India, various ICT tools and platforms are providing an opportunity for educators to share and optimize resources among each other and helping to learn. The government has launched various initiatives like "Digital India" campaign to take advantage of the larger scale penetration of the Internet to reach every corner of the country. DIKSHA platform is a part of one such initiative by the MHRD, envisioned as One - Nation — One digital platform serving as a digital platform for the teachers. The platform aims to create a repository of resources for educators and build a strong community. From its inception, DIKSHA has evolved and updated with various features and tools to make the platform more efficient. The document will guide the users to navigate through the platform and understand the prerequisites for the implementation of the DIKSHA platform in schools. The document will be useful for a diverse set of stakeholders, including teachers, school heads, administrators, parents, and students, for smooth implementation of DIKSHA platform.

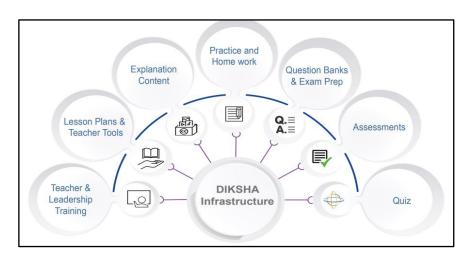
Introduction

Information and Communication Technology (ICT) in the Education sector possesses great potential for providing quality education for all learners. In India, various ICT-driven tools and platforms are allowing educators to share and optimize resources among each other and helping learners to learn. This has helped students to obtain knowledge and skills limited to their socioeconomic background and geographic location. This has been possible with the large-scale penetration of the internet and various government initiatives such as the "Digital India" campaign which has created a conducive environment for moving towards digital education. DIKSHA is one such platform launched by the Ministry of Human Resources and Development, as a one-nation- one digital platform and serves as a national infrastructure for teachers. It is a unique initiative that leverages existing highly scalable and flexible digital infrastructures. The platform aims to support teachers to create training content, profile, in-class resources, assessment aids and connect with the teacher community.

Platforms like DIKSHA hold the potential of bringing a wave of transformation in the use of technology for instruction and teacher preparedness. Especially, in the context of the recent COVID-19 related disruption of schooling, DIKSHA makes it possible to enable learning/education at home through innovative state programs, hence leapfrogging the use of technology for the benefit of teachers and learners across India. It allows flexible and personalized learning at the speed of the learner and continuously expanding the range of content through digital means. This document presents a comprehensive guide for the smooth implementation of the DIKSHA platform in schools. This will help administrators/decision-makers to help schools enable a supportive environment for teachers and students to access the resources available on the DIKSHA platform by providing them with the right infrastructural facility and knowledge. The document will provide a roadmap or pointers for infrastructure preparedness, teacher training, leadership, and curriculum development in the schools. Schools should be equipped with these minimum prerequisites for successfully leveraging the benefits of the DIKSHA platform. These guidelines will be useful for a diverse set of stakeholders, including school heads, teachers, parents, teacher educators, and students.

DIKSHA Platform

DIKSHA - Digital Infrastructure for Knowledge Sharing, is a national platform launched in 2017, as an initiative of the National Council for Education Research and Training (NCERT), Ministry of Education. The platform provides diverse and rich curriculum-linked e-content requirements of learners and teachers for all states/UTs accessible across digital devices like laptops, mobile, desktop, tablets, etc., with the help of QR-coded Energized Textbooks. The range of features envisioned for DIKSHA includes in-class resources, teacher training content, assessment aids, teachers' profiles, news and announcements, and communication tools to foster a teacher community. The platform also provides teachers with tools and platforms to create and upload content. Currently, the platform supports more than 30 languages and the various NCERT, CBSE, and SCERTs curriculum across India for grades 1 to 12. The platform provides each state/UTs the freedom to design and run programs for their teachers and learners, and leverage the DIKSHA platform in its way. The goal of the platform is to host Open Educational Resources (OERs) for educators and students.



Source: India Report Digital Education

Objective

The objective of the platform is to host Open Educational Resources (OERs) for educators and students. The aim is to make the platform to be used by educationists, experts, organizations, institutions - government, autonomous institutions, non-govt, and private organizations to participate, contribute, and leverage a common platform to achieve learning goals at scale for the country. It is envisioned to be a "One Nation One Platform" for school Education by the government of India.

Features

- The platform provides teaching resources such as lesson plans, concept videos, worksheets, mapped to the curriculum, teacher's training content, assessment aids, teacher profiles, news and announcements, and communication tools to foster a teacher community.
- The resources are made available both online and offline for smartphones, tablets, and other devices and are mapped both to local languages and curriculum.
- It provides access to a large number of curriculum-linked e-content through several use cases and solutions such as QR-coded Energized textbooks (ETBs).
- Dashboard for tracking progress and assessment
- The user action on the platform emits comprehensive and anonymized data which can be beneficial to content developers, state/UT teachers, and administrators to plan their programs and interventions.

Expected Outcome

- Availability of relevant personalized professional development for teachers anytime and anywhere
- Resource sharing among teachers to save efforts and time
- Access to personalized workspace for teachers to plan and track their progress
- A comprehensive platform for hassle-free interaction of all stakeholders involved
- Standardized observation tools on the platform will provide stakeholders with data to support teachers and do continue training and analysis.

Infrastructural Requirements

The following are the basic minimum requirements for schools that have already onboarded DIKSHA or are planning to do so. The availability of these requirements will ensure a pleasant experience for the users.

Compatible Devices

DIKSHA platform can be assessed by learners through multiple devices using either the mobile application or web portal. The app is available only on Android smartphones and can be downloaded here on <u>Google Play</u>. The web version can be accessed via the browser here.





E-content can be accessed and used through multiple types of devices-mobile phones, tablets, laptops, and desktop computers as well as projectors, smartphones, and smart television. Availability of these devices in the schools will define the experience leveraged with the DIKSHA platform. Teachers equipped with android smartphones will be the bare minimum to introduce DIKSHA in the schools. Availability of a smartboard or a smart T.V can help in engaging the whole class together at the same time. The presence of tablets will provide a good opportunity for students to explore the platform themselves during the lessons and engage meaningfully under the guidance of the teacher. Schools investing in these devices for teachers and as well as students can optimize the platform to its full potential.



Internet Connectivity

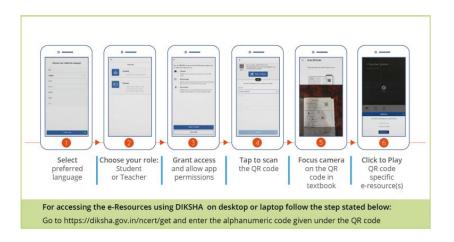
Strong internet connectivity is an integral part of using the DIKSHA platform. Schools should make sure of having stable internet connectivity through Wi-Fi medium, LAN network, or mobile data to smooth functioning with the platform. The unique feature of the platform to provide offline desktop solutions also helps to access the e-resource due to limited internet connection. Once the content is downloaded onto a device, connectivity is not needed to play/access the downloaded e-content. Users can benefit from this feature in low or no internet conditions, where resources can be downloaded and accessed later.

Energized Textbooks

Energized Textbook (ETB) is a feature aimed at providing access to digital content for various topics in physics textbooks. It is designed to bring about transformative changes to the overall educational experience for all stakeholders involved. Schools will be required to be equipped with NCERT or state board books which are embedded with QR codes. Teachers and students can access various contextual digital resources by leveraging QR codes that link aggregated/created digital content with the existing textbooks. Using this solution, educational boards provide access to different kinds of curriculum-linked specially curated and highly relevant learning and teaching digital content explanation videos, practice worksheets, sample tests, quizzes, courses, lesson plans, learning outcomes, pedagogy materials, misconceptions, and others. Energized books also have an audio version of the textbooks aligned with the content in sign language aimed at Children with Special needs (CWSN).



The QR code can be scanned using the mobile phone camera or by using the DIAL code associated with the QR code. This provides teachers instant access to pedagogical best practices for each chapter when they want and where they want.



Roadmap for Introducing ETBs by States/UTs

MHRD has requested the states/UTs to follow the recommended progression for onboarding existing textbooks with QR codes. States will be responsible for the trackwise rollout of ETBs. The approach for rollout and use of ETBs across the states can be divided across four key tracks: -

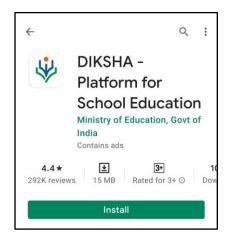
- 1. <u>Scope Identification and QR code generation</u>: Identification of the grades, languages, subjects, users (teachers/students/both), type content required videos, lesson plans, teachers' instructions, etc. This exercise will help in identifying and finalizing the number and placement of QR codes before sharing them for printing.
- 2. <u>Source Content</u>: Curating content and linking it to the right chapter as per the textbook table of content is a crucial next step.
- 3. <u>Training and Capacity Building</u>: Conducting workshops (offline/online training) for teachers and or master trailers on QR code placement, content creation as well as training teachers on using ETBs in the classrooms.
- 4. <u>Monitoring and Feedback</u>: After the rollout of the energized textbooks, it is imperative to gather feedback and leverage data, tools, and reports to analyze the feedback and act accordingly.

Installing and registering on DIKSHA

Any individual user, organization, or recognized learning body can install and register on the platform. Users should have valid credentials to sign in to the DIKSHA portal. The sign-in feature allows authorized users to access the content. Using this feature, it is possible to differentiate content for different user types. Anonymous or guest users can view or access a limited number of courses and resources, while registered users will have access to all the content available in the library. Following are the detailed steps for installing the app/platform on a mobile device or a desktop device and registering.

Installing the DIKSHA App

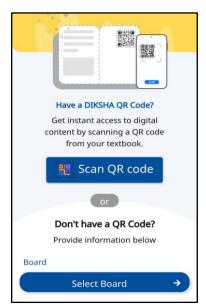
 Diksha app can be installed on the Google Play store. Search DIKSHA NCTE, click on the **Install** option.





• On the next page, users can select the **language** in which the app is to be used. After selecting a particular language, the user can move to the next page by clicking on continue.

 Users can select the user profile from the four options. Based on the profile selected the mobile app displays curated content and sends topic-based notifications based on the selection of the user profile.





• After selecting the user profile, users can access the resources directly by scanning the QR code or by selecting a particular board. On selecting the board, users will get the option to select medium and class and will be directed to the related resources.

For more information about DIKSHA Mobile App

Registering on the DIKSHA platform

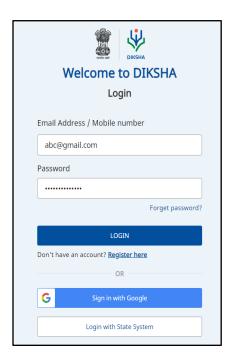
Users can register on the DIKSHA platform using three methods:

- 1) Google Account: Users can log in using their Google account details.
- 2) <u>Self Register</u>: Users can log in creating new credentials to access the DIKSHA app.
- 3) <u>State ID</u>: In the case of an official person, users can log in with the user ID and password provided by the state.



Logging in with Google Account

Users can log in on the DIKSHA portal with their Google account credentials. They need to enter the Gmail ID or registered mobile number and password to log in.





Registering on the platform

On selecting the **Register Here** option, users will be taken to the next page where one needs to enter the basic details like name, contact details, and create a password for the app. On successful registration, an OTP will be sent to the shared contact number. On submitting the OTP, the user profile will be created.



Logging in with State System

State officials can log in using the valid credentials provided by the state. Select the state from the state drop-down list. On successfully logging in, users will be directed to the DIKSHA app as logged-in users. First-time users must enter the mobile number which is registered with the state portal.

For more information about Installing and Registering on DIKSHA

Exploring Content on DIKSHA Portal

Users can explore the repository of content on the DIKSHA platform by selecting a user profile. Examples of supported content types include videos that help teachers explain and learner's learn, videos that clarify concepts; practice content for learners (e.g. quizzes/questions); assessment content to help assess the learning for the benefit of teachers and students (e.g. question bank and assessment tools); sample question papers for exam preparation; interactive content for an immersive experience to enhance learning; creative and critical thinking questions; lesson plans; microcourses; curiosity questions for use in the class; among others. DIKSHA supports a variety of types and formats of interactive content including HTML, ECML, videos, H5P, PDFs, MP4, and other formats as well. Resources can be explored both on the browser version as well as on the mobile application version.

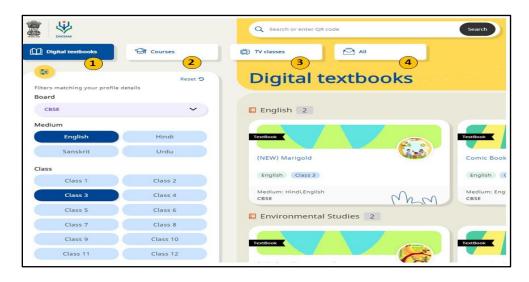
On the homepage of the official website of DIKSHA, click on the **Explore DIKSHA** tab on the left side of the screen.



Select the **Language** option from the drop-down option on the right side of the screen.



Users can select from the **Four Options** at the top left of the screen to search for 1) Digital textbooks 2) Courses 3) TV classes or 4) All





For further refining the search, users can select the six filter options given on the extreme left of the screen to look for resources. They can select the 1) Board, 2) Medium, 3) Class, 4) Subject, 5) Content type, and 6) Media Type.

Users can also search for resources directly by entering a QR code digit on the search box given at the top of the screen.



"Ask Tara"

Users can also use the feature "AskTara" for direct links to pages, resources, courses users want to find. Users can find the Ask Tara, a bluecolored icon on the extreme bottom right side of the screen.





By clicking on the icon, users are taken to a chatbox where they can type their search using the prompts given by the chatbox.

Capacity Building of the Teachers and School Leaders

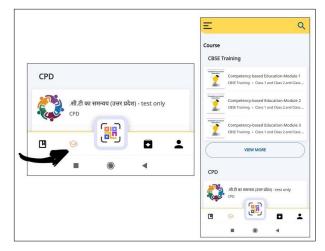
Teachers play a big role in the process of the smooth transition of digital education. To successfully implement the DIKSHA platform in schools, the first requirement will be to prepare teachers for adopting digital technology in their classrooms. Also, to use the platform to keep themselves updated with the new development in education for their professional growth. States and schools can achieve this by providing initial training for teachers and school leaders will help them to navigate through the platform followed by continuous training sessions. Teachers can also register for various online courses on the platform to learn new skills and specific knowledge of their subject. Being part of various forums and discussion groups provide teachers exposure to interact with peer teachers and share resources and their learnings.

Online Courses for Teachers

Online courses available on the platform allow structured learning programs targeted to build or enhance specific knowledge and skills for learners. These courses help learners to learn the skill at a place of convenience and at their own pace without having to leave their preferred premises. An online course can contain learning material using a mix of videos, interactive content, practice questions, and reading material as well as an assessment to evaluate learning. Teachers will also be recognized for completing the course, by providing digital credentials which are digitally verifiable and can be shared by users with anyone's code. Teachers can take courses relevant for them as and when required throughout the academic year; and share their skill-building accomplishments with their friends and colleagues using digital credentials received on course completion. Also, the availability of relevant courses for school leaders improves their leadership skills, concepts, and application.

On the browser mode, users can find the **Course** option from one of four tabs given on the top left of the screen. Users can select training sessions by various national and state boards along with preference other filters like a subject, class, publisher.





On the mobile application, the icon for the courses can be found on the four options given at the bottom of the screen. Users will be able to see this option only after logging in on the platform.

The platform also offers certificates after completing a course. Certificates are issued based on merit and the best score of the user. A notification is sent after the course is completed and the certificate is generated. Users can verify their certificate by scanning the QR codes printed on the certificate with their mobile application and can be published on the user's profile. (A sample certificate is shown below)



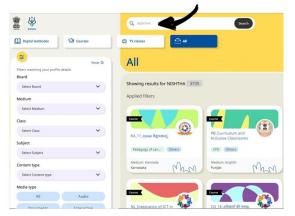
For more information about courses for teachers on DIKSHA

NISHTHA Training

<u>NISHTHA</u> stands for **School Heads' and Teachers' Holistic Advancement**. The platform hosts training courses offered by NISHTHA, a capacity-building program for "Improving Quality of School Education through Integrating Teacher Training. It aims to build competencies among all the teachers and school principals at the elementary stage. The focus of these training is to: -

- to move from Rote Learning to Competency-based learning
- Developing School Heads and Teachers as First level Counselors
- Improving Learning Outcomes through Joyful, activity-based, ICT integrated teaching-learning.

The training provides support to school heads to move from Administration to Leadership and improving academics. It guides them to build inclusive schools through reflection on issues like Gender, CWSN, and awareness of the RPWD Act. Teachers and Schools Heads can access NISHTHA training by typing "NISHTHA" in the search box on the DIKSHA homepage



For more resources about NISHTHA training on DIKSHA

VidyaDaan

<u>VidyaDaan</u>, a program based on crowdsourcing of content from teachers, is also leveraging the DIKSHA platform. Contributions can be made by individuals, teachers, educationists, subject experts, schools, government, and non-government organizations, etc. after registering & nominating themselves. These contributions can be of different types of content such as explanation videos, teaching videos, practice questions, competency-based items, lesson plans, etc. for any grade from 1 to 12 and for any subject as specified by

and for any subject as specified the states/UTs under their respective projects.

Users can click on the option of **Contribute** from one of the five options given on the top of the DIKSHA homepage.



This will take the users to the next page where they can click on the option **Participation.**



The follow-up page will explain the users: -

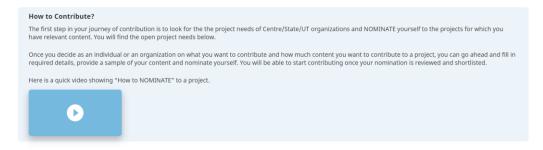
1) Types of e-learning resources they can contribute



2) Guidelines to contribute



3) How to contribute



4) Projects to contribute, where users can select from various projects given to contribute to.



For more information about contributing content

Roadmap for States in implementing DIKSHA

State Governments are responsible for the implementation of DIKSHA in the schools in their states. Following the MHRD guidelines for basic implementation, states have the liberty to exercise autonomy, independence, and choice to craft and run learning programs to suit their needs and achieve their goals, by using solutions, tools, and data on the platform. The following roadmap is suggested by MHRD for states to plan and prepare for DIKSHA implementation.

Institutionalization

- States should appoint SCERT as a nodal agency and SCERT Director as nodal officer for DIKSHA implementation in the state.
- Formation of a steering committee headed by the Secretary/Principal Secretary/ACS Education and include SPD SSA, Director SCERT, and other Key education officials in the state.
- A project management unit should be set up including representatives from DIETs and subject matter experts.
- Different committees to review content, data, and technology should be formed.

Preparation

- Collection of data of teachers, teacher educators, and school administrators in the formats provided by the MHRD/DIKSHA team.
- Collation of available digital content for teaching and learning, professional development, and school leadership.
- Identification of grades, subjects, mediums for implementation of energized textbooks.
- Creating outreach, communication, and dissemination plan for DIKSHA
- Capacity Building plan for teachers, State officials, district officials, BRCs, and CRCs for DIKSHA usage

Setting up the DIKSHA platform

- Setting up of state homepage on DIKSHA portal
- Uploading and syncing data of teachers, teacher educators, and state administrators
- Uploading taxonomy for different verticals
- Curation and upload of content for teaching and learning, teacher training & professional development, and school leadership

Implementation

- Outreach and communication to onboard teachers and other users of DIKSHA
- Creation of Digital Content for students, teachers, and school leaders
- Translation of exemplar digital content
- Implementation of Energized textbooks

For more information about MHRD guidelines for states in implementing DIKSHA

Monitoring and Support

DIKSHA is built ground-up to record data of usage that is extensive, structured, and actionable. User actions on the DIKSHA mobile app and the DIKSHA web portal emit comprehensive and anonymized data which can be beneficial to content developers, state/ UT teachers, and administrators to plan their programs and interventions. This data gives multiple stakeholders the 'ability to see' across the entire lifecycle of learning. The availability and actionability of data are critical parts of enabling the learning, teaching and managing the administrative and governance aspects of education as a systemic set. Extensive, aggregated data of usage is available to states/ UTs, for continuous analysis of usage patterns, content consumption patterns, thus enabling iterations and fast improvement, experimentation, and innovation drives at the state/UT level.

Dashboard Feature

State Administrators can use the feature of Dashboard to view reports and a unified view of the organization's content creation and consumption patterns. The feature provides graphical representations, detailed data in tabular format, and summary reports of integrated data for different scenarios, per geography and location. The data help with: -

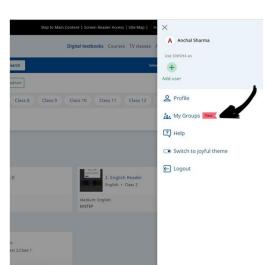
- gauge and assess the value, popularity, and acceptance of content created and used on the DIKSHA portal
- viewing the number of QR code scanned
- viewing the number of contents downloaded and played
- getting details of QR codes currently available in textbooks

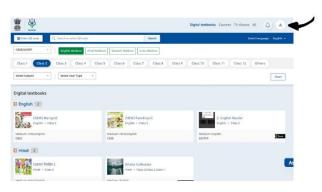
For more information about Dashboard Feature

Groups

A group feature is a collective of members who get together for a purpose. As a registered DIKSHA users, users can create several groups for specific purposes. This feature encourages educators to be part of a community and support each other. The features allow them to take classes together and share reflections.

Users can utilize the feature of Groups by clicking on the profile icon on the extreme right of the screen.





Users can find the feature of "My Group" in the drop-down box.

For more about the Group feature

Learnings from various states adopting DIKSHA

Uttar Pradesh

The state has leveraged DIKSHA to ensure continuity of learning of students and training of teachers from home through high-quality curated digital content. The state is working with several partner organizations along with a dedicated content cell towards content enrichment and improvement and they are promoting learning at home via the PRERNA program. The state is also putting its efforts into bringing more than 50 lakh families onboard DIKSHA via its mass outreach programs.

Maharashtra

Maharashtra is leading the efforts in using DIKSHA to its fullest extent. It was the first state to integrate QR codes into every textbook at every grade level up to 10, in all languages of instruction in the 2018-19 academic year. The state is leading the way forward for other states to follow this technology-enhanced education. The platform has helped many "tech-savvy" teachers of the state to explore their potential in creating content and innovating with their classroom teaching. The platform emerged as a powerful tool in the state and across India for teachers and students to navigate online learning during the pandemic.

Tamil Nadu

The state introduced various innovative practices on DIKSHA including in-classroom digital assessment. Usage of DIKSHA has become a part of regular teaching & learning in many schools in Tamil Nadu and is also integrated with the class schedule. Tamil Nadu has also been a pioneer in the content creation model that it follows, which details out the type of content to be created for each chapter of a textbook including explanation content, practice & assessment questions.

Gujarat

The state has leveraged DIKSHA for its teacher professional development programs and rolled out 11 courses for teachers of primary and upper primary grades; more courses are being launched for pre-school and secondary education teachers. The state has provided joyful digital content to students and parents who are at home to ensure continuity of learning from home. The state is also broadcasting learning programs for children on TV to ensure learning at home and putting the same on DIKSHA as well, to enable coherent access to digital content.

Need Assessment Study of the Schools

Before DIKSHA implementation in schools, a background study with regards to digital education in the schools can cater best to the required needs of the school. States/UTs can consider conducting surveys in schools to identify various ICT facilities available at the school. Grouping teachers for their proficiency with ICT skills will help define different needs with training and support. This kind of designing and planning programs for schools will help with long-term continuous learning. Adequate measures should be taken to make sure schools have adequate infrastructure to support teachers and students to uptake the DIKSHA platform, like computer sets/laptops or tablets. Developing need-based strategies based on the availability of human resources and digital infrastructure, needs of students, teachers, parents, and community to create appropriate digital environments. Teachers should be encouraged to incorporate various ICT tools in teaching-learning and assessments. They should be equipped to examine and understand the different learning styles of their students. This will help teachers to plan their lessons in a differentiated manner targeting children with different learning styles. Also assessing the kind of support students have at their homes will contribute to better implementation planning.

Critical Steps in the Implementation

While implementing the use of digital platforms like DIKSHA in schools, the following steps can be crucial in a smooth transition.

- Programs planned should be in language/s in which teachers and students are well-versed.
- The socioeconomic background of the students should also be considered while planning digital education for them.
- A common platform like WhatsApp or email for communicating important information about the platform, training, updates among the teachers.
- Regular motivation from School leaders/Heads to motivate teachers and students for their efforts and contribution in integrating the technology with teaching.
- Awareness programs for parents should be carried out to make them understand the role of the DIKSHA platform and how they utilize these resources to help the children at home.
- Regular interaction with the parents through parent-teacher meetings or message services like WhatsApp can help the school to make parents an important part of the process.
- Monthly check-ins with School heads or fellow teachers will help them feel supported.
- Special focus on the quality standard of the content made by the
- Feedback mechanism in place where school representatives can share their feedback or suggestions based on their experience with the platform with the state authority.
- Schools should include awareness programs about Cyber Safety and security as a part of their curriculum to promote the safe use of digital platforms.

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Getting Started with DIKSHA

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Understanding QR Codes

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