EkStep

A NANDAN NILEKANI VENTURE

The Collaborative Learning Management System

CASE STUDY

MANTRA LABS

EkStep is an open platform to create, share, and distribute free community-sourced educational content for primary school children.

Sunbird is a searchable, discoverable repository of free resources contributed by educators, engineers, pedagogues, teachers, learning & data scientists.

Problem

EkStep required a flexible framework — that could facilitate an open platform for others to create & share educational content — based on research done in association with academics, psychologists and neurologists.

Requirements

Open, mobile friendly **web-portal** with secure client panel, secure admin login and mass upload facility

Front and back-end **devops** for continuous testing, deployment and integration

Open source, cross-platform **architecture creation** and support

Robust **Machine Learning Workbench** — platform for applied ML activities that reduces the need for multiple tools

EkStep

Solution

Mantra Labs created a **collaborative learning management system** that addresses their core need — disseminating the EkStep pedagogy of game-based Learning and Assessment.

01 **Sunbird Learning Platform** —
The learning platform powers the EkStep pedagogy of Game Based Learning and Assessment.

02 **ML Workbench** —
Creates a level of abstraction that enables users to express a ML application as a Directed Acyclic Graph.

03 **Sunbird Content Editor** —
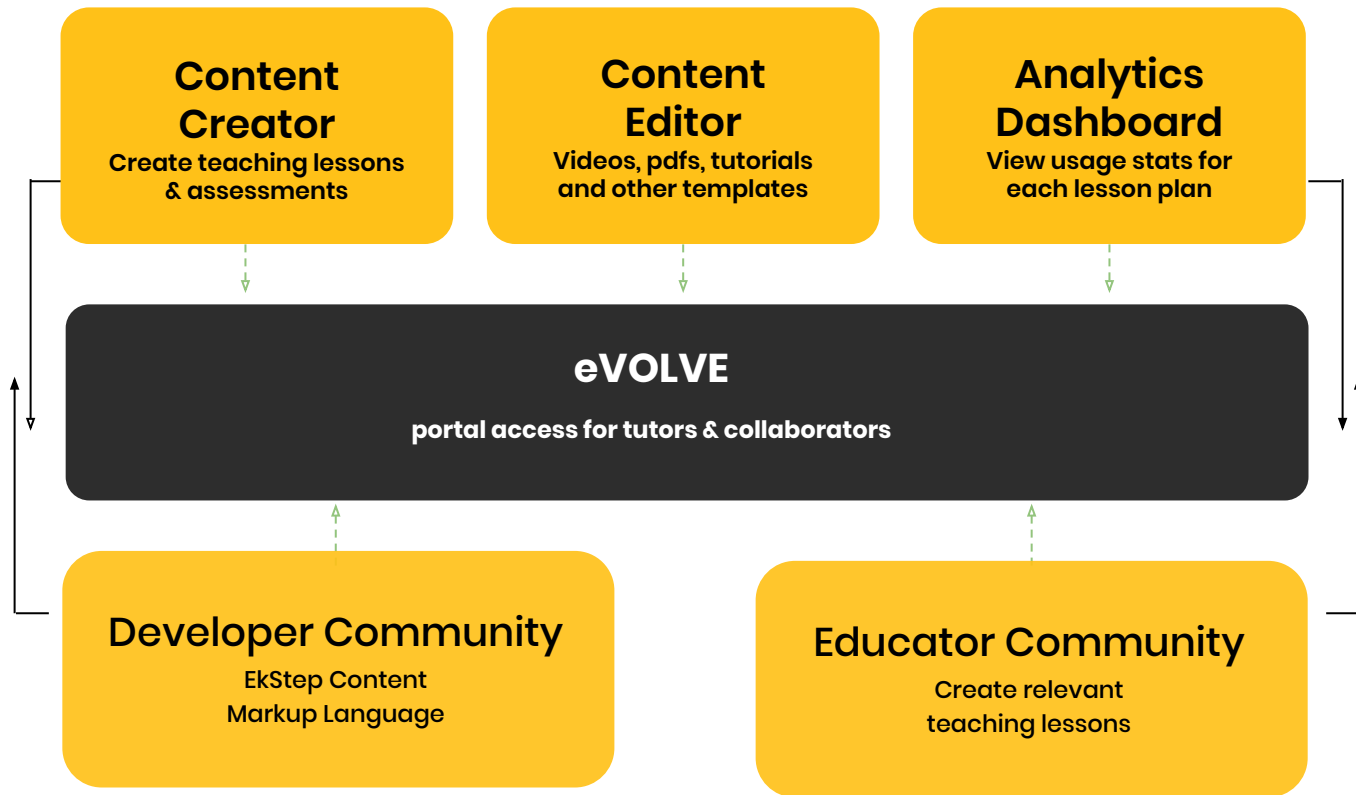Editor to create content to be hosted and consumed on the EkStep platform.

04 **Analytics Dashboard** —
Provides an integrated view of the collaborators, contributors and learners to track learning outcomes.

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The EKStep Learning Environment

Content Creator
Create teaching lessons & assessments

Content Editor
Videos, pdfs, tutorials and other templates

Analytics Dashboard
View usage stats for each lesson plan

eVOLVE

portal access for tutors & collaborators

Developer Community

EkStep Content Markup Language

Educator Community

Create relevant teaching lessons

EkStep

How it Works

'**Hard Spots**' are identified sections or subsections, within chapters, that are in need of new or improved learning content that better addresses — the issues faced by either tutors or students, or both.

The EkStep platform is integrated with the learning portal — ***Diksha***, through which students and teachers across the country have access to free and open-sourced educational content.
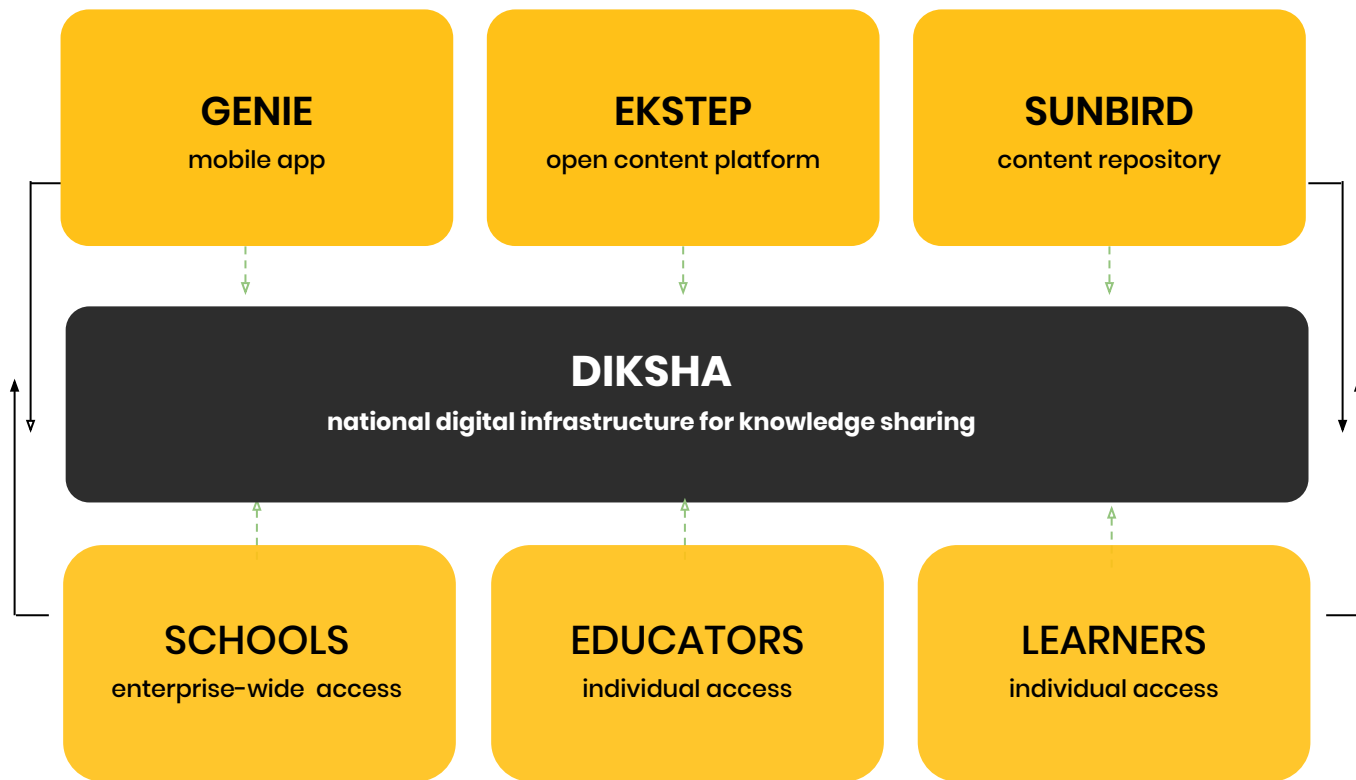
Each lesson plan is itemized into the database with its unique table of contents mapped.

If a tutor or student has difficulty in comprehension from any specific piece of educational content — a '**hard spot**' can be marked in the system and it can be addressed by the community.

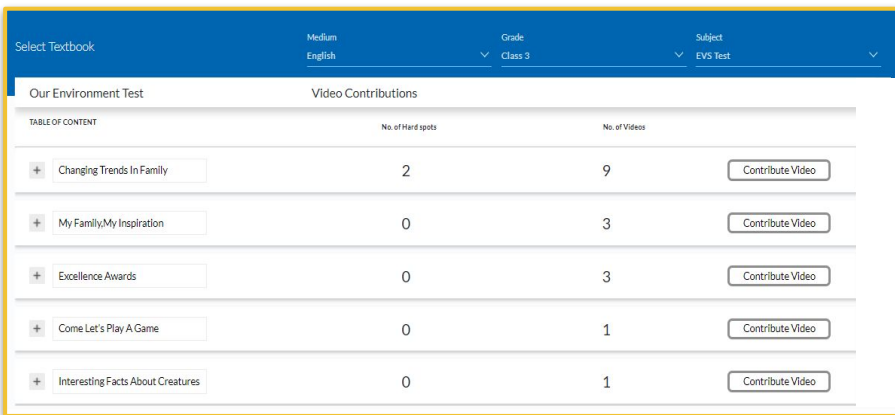Following a 'hard spot' fix, often addressed through video, the updated content is then reviewed for approval.

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The 'Open Learning' Ecosystem

GENIE
mobile app

EKSTEP
open content platform

SUNBIRD
content repository

DIKSHA
national digital infrastructure for knowledge sharing

SCHOOLS
enterprise-wide access

EDUCATORS
individual access

LEARNERS
individual access

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Creating the perfect open learning platform

eVolve — Portal to contribute content videos & identify 'hard spots'

Select Textbook	Medium English	Grade Class 3	Subject EVS Test	
Our Environment Test		Video Contributions		
TABLE OF CONTENT	No. of Hard spots		No. of Videos	
+ Changing Trends In Family	2		9	Contribute Video
+ My Family,My Inspiration	0		3	Contribute Video
+ Excellence Awards	0		3	Contribute Video
+ Come Let's Play A Game	0		1	Contribute Video
+ Interesting Facts About Creatures	0		1	Contribute Video

The portal was built using **React** (*javascript based*) for the front-end, & **Django** (*python based*) frameworks for the back-end, with a **QA cycle test pass-rate of 100%.**

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Outcomes

By creating a flexible and modular architecture that enables EkStep's pedagogy, **Mantra Labs** contributed to the portal's success leading to significant results to the learning ecosystem, altogether.

9000+
Educational content created
(videos, assessments, presentations)

3000+
Hard Spots identified

78,00,000+
Educators & Learners

99.99%
Portal Uptime

4+
States Involved
(Rajasthan, Orissa, Goa, Assam & CBSE Board)

EkStep

About
Mantra Labs

◆ **Domain Focused Products and Solutions for the Digital Insurer**

◆ **Real World Problem Solving using Artificial Intelligence and Customer Experience Consulting**

100+
PROJECTS

175+
GEEKS

03
OFFICES

INSURTECH100
2019

www.TheInsurTech100.com

Key Partnerships

NVIDIA. IBM Watson amazon webservices mongoDB

Key Clients

Let's build what you need, together.

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