

Sulabh App 2.0 - A Modular Learning Management System with Activity-Based Learning

Degree programme : BSc in Computer Science

Specialisation : Digital Business Systems

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Industrial partner : Sharada Educational Trust, Bangalore

In rural India, interest in digital education is rising, and with it the need for custom, simple Learning Management Systems that allow elementary-level students to make their first acquaintance with digital learning without getting overwhelmed by overly complex systems. At the same time, teachers and admins need ways to manage content and keep learners engaged in a setting where technical resources may be limited. These are the challenges that Sulabh 2.0 is trying to tackle.

Initial Situation

This project is built upon a previous bachelor's thesis done by BFH students, which aimed to provide an initial version of a Learning Management System (LMS) for students in rural India. While this platform was a big success and quickly gained hundreds of users, the stakeholders at Sharada Educational Trust ran into problems regarding management of a service that grows so quickly.

Goal

Over the course of a previous project as well as this bachelor's thesis, one of the goals was to extend the system into a unified, modular platform that connects all existing features while enabling future developers to easily build upon it. Another goal was to start development of a module for this LMS that allows creation and management of activities for the students to complete.

Activity-Based Learning

This newly created module was given the name "Activity-Based Learning Environment" or ABLE for short. With quizzes to solve for points, leaderboards to foster competition and motivation as well as certificates for completed curriculums, this module is all about gamification to increase student engagement and is designed to offer elementary-level students in rural India a fun and interactive way to learn. The content team at Sharada Educational Trust has been hard at work creating activities for learning English and financial literacy.

For the admin side of the application, alongside detailed reporting functionality, this module offers practical ways to create and modify activities, users and so-called curriculums and cohorts, which offer a way to guide the students towards activities suited for them.

Results

The Sulabh 2.0 app achieved all the goals and is ready to be deployed. Additionally, extensive user tests have been carried out by a dedicated team from Sharada Educational Trust. Using a common issue tracker, any issues found with the application could be swiftly addressed and thanks to a fully automated deployment pipeline, changes were very quickly made available to the testers.



David Pfister

Outlook

The application is set to be deployed in production in June 2025. The Sharada team expects to have many clients using their application within a short time. Due to the new features, the team hopes this app will reach over 1000 government schools and help improve the lives of many rural students.



Marcel Zbinden



Ms. Shwetha P.S., teacher and superuser of the Sulabh app