



LEARNING MANAGEMENT SYSTEM

Project Details, Implementation and Performance

The state of Kerala has achieved better health indicators when compared to other states of India. Many of its health indicators surpass those of other Indian states, some of them are even at par with developed countries. The first step towards achieving this goal is initiating the capacity building of all categories of employees in the system. Since Health services is a dynamic system with ever-changing services, guidelines, protocols and technologies, all staff need to be oriented to the periodical changes in the system. Capacity building in healthcare should be a continuous process so as to maintain the quality of services provided across the state.

State training division, national health mission, Kerala in association with CDIT developed an online platform for making the learning experiences easier for health professionals and volunteers who caters the health care system in KERALA. The platform is currently running in Moodle platform. The LMS of state training division, NHM offers a best user-friendly experience in the learning management system platform.

The learning management system developed was based on the Moodle platform and web based interactive platform. The content creation and cognitive design part was done by State training division, NHM Kerala, Software side was governed by CDIT. The platform was initially piloted with 2 courses and a minimal participant was enrolled in a controlled manner.

Piloting of the platform

Initially two courses were uploaded in the platform (Training on Kala azar for lab technicians and E Suraksha course for the volunteers from Trivandrum district) both of the courses were tightly followed and assisted during the course. The two courses were completed by most of the participants and shows more than 90% adherence to the course. As the second part the LMS platform was integrated with live session facility, after this the platform was able to conduct live interactive sessions with participants.

Salient features of platform developed

- Can conduct different format of training programs (Live sessions, self paced Open courses, Self paced restricted training programs).
- The enrolled participants can freely view and participate in courses which all are opened for the respective category.
- Highly interactive platform – Can form discussion forums within the course; can interact with designated faculty at any time etc.
- Creative assessment methods – Can establish more creative assessment methods to the courses or sessions such as quizzes, exams, puzzles, descriptive exams etc.
- Can integrate with live platform with zoom
- Can conduct live session with 1000 participants at a time.
- Good format for accounting and reporting of participants activities

Types of course offered in LMS

Now the learning management system is offering courses with different formats. All the formats are adopted and developed as user friendly formats.

- **Self paced restricted course** – This type courses are designed in way that the participants can enroll to the course in restricted way through enrollment key. This can be used for the training of selected category or selected groups. The course materials (Video materials, lecture video, demonstration video, PPTs, interactive PPT etc) can be attached with the course module. Specialized training can be conducted through this mode and we can closely monitor the participants through this method, Scheduled live sessions can be integrated with this method. Also faculties can provide downloadable materials for the participants.
- **Self paced open course** – This type was designed in manner that our platform was scheduled as each of the participants will be in the respective job category as per their designation or job type. The common trainings for this category are opened for all those who are listed under those categories. The course materials (Video materials, lecture video, demonstration video, PPTs, interactive PPT etc) can be

attached with the course module. Downloadable materials, tests, quizzes, various assessments and live sessions can be integrated with this type of course.

- **Live sessions** – Complete live interaction sessions can be conducted in an open way or restricted manner. The live sessions can be scheduled in zoom through this platform and make it available for the enrolled participants in the learning management system.

Course creators in the learning management system

Various agencies and divisions in the health care system of KERALA were identified as the course creators of the learning management system. All courses developed under

List of identified course creators for LMS

- State Training division, NHM Kerala
- All program division in NHM/All state level program officers
- Kerala state institute of health and family welfare
- State Health system resource center, Kerala
- District Medical officer
- DPMSU / District Program Managers

Process of course creation in LMS

The preparation of e course module contains the following sessions

Mapping of the trainings - Prepare a list of trainings carried out by a single division/ a program officer. The listed trainings should be prioritized as per the requirements and demand.

Designing the course – Designing the individual course will help the online platform conversion. Gather the available information regarding the course and use standardized formats for the course design preparation.

Preparation of the detail course plan – The detail course plan should be prepared for each and every course. So that the conversion process will become easy. (refer the format for course plan)

Preparation of session plan (Blue print of the session) – Each and every session should be planned in details so that the wastage of man, money material can be avoided. The session plan should contain objective of the session, content of the session, plan, learning experiences, module type, and associated materials.

Content creation – The contents of the course should be created as per the plan/requirement/module of the course. The type of the content delivery (Video module, live sessions, Image, chart, diagrams etc.) can be decided as per the pre fixed plan in the course plan. The prepared content should be vetted by a team of expert in the field.

LMS Upload – The created content/module should be handed over to the state training division, NHM, Kerala. Training Division will examine the module and hand over the module to the technical team to upload in the LMS.

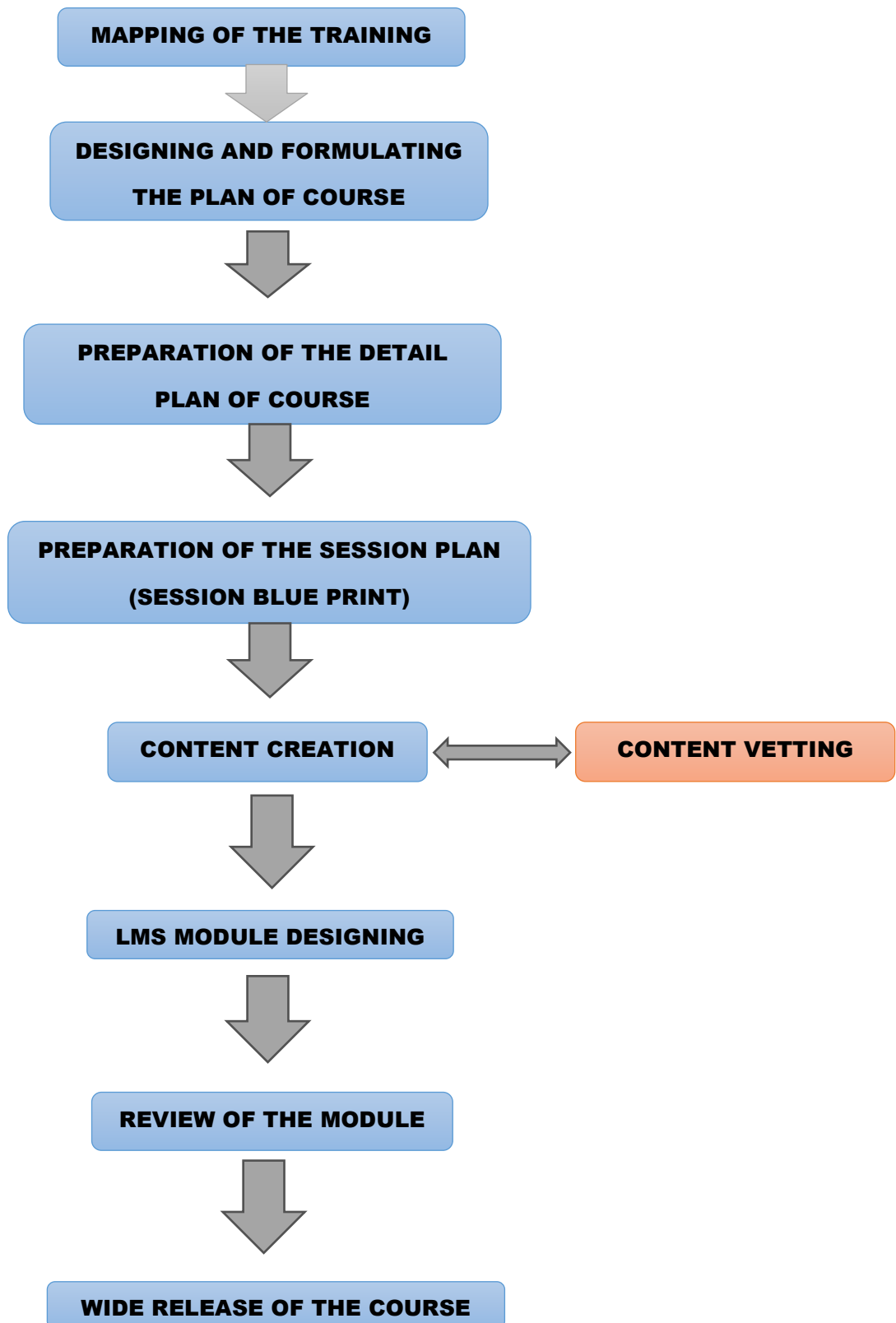
Review of the session – The uploaded sessions should be reviewed by the state training division and concerned program division before piloting/onboarding the session

The screenshot displays the Kerala Health Training LMS interface. The browser address bar shows keralahealthtraining.kerala.gov.in/my/. The navigation menu includes Home, About Us, Courses, Course Guidance, FAQ, and Contact Us. A sidebar on the left contains links for Dashboard, Site home, Calendar, Certificates, Private files, My courses, and Site administration. The main content area is titled "Lab Technicians" and features a grid of training modules:

- Training on Kala Azar for Lab Technicians
- NPCDCS: A SHORT COURSE ON NATIONAL PROGRAMME FOR PREVENTION & CONTROL OF CANCER, DIABETES, CARDIOVASCULAR DISEASE AND STROKE (NPCDCS)
- Training on National Tobacco Control Program
- Training program on National AIDS Control Program
- Training on National Tuberculosis Elimination Program
- Training on Integrated Disease Surveillance Program
- Training on National Leprosy Eradication Program

Below the "Lab Technicians" section, the "Pharmacist" section is partially visible. At the bottom, there is an "Accessibility settings" link and a URL: <https://keralahealthtraining.kerala.gov.in/course/view.php?id=29>.

PROCESS OF CONTENT CREATION AND FLOW IN LMS CONTENT UPLOAD



Implementing Agency/Partners

Training Division of National Health Mission is the state hub in implementing and monitoring the activities of training through the LMS platform. The Training division along with CDIT coordinates training and distribution of login credentials to doctors who will be working on the eSanjeevani telemedicine platform. The Training division gathers feedback from the beneficiaries and interprets this feedback. The impression derived from this feedback is communicated to the technical team located at CDIT to modify the platform.

Project Cost

The cost incurred for establishing this project successful is for

- Technical cost including the – server side, web page designing
- Content creation – which includes shooting and editing video training materials

Tech Architecture, solutions, applications

The LMS platform is equipped to handhold more than 20000 participants at a time and is also provisioned to conduct live session with 1000 participants at a time. The system is not equipped to hold the load of huge volume of data hence the video contents are uploaded to the YouTube.

Governance structures put in place

The activities of the training division are coordinated through the office of state nodal officer training. The activities at the district level are coordinated through the office of the district nodal officer training.

KSIHFW & SHSRC play a key role in supplying training contents

Stakeholders & Key beneficiaries

The major stake holders for the service delivery are the national health mission – Arogyakeralam and the department of health and family welfare for the government of

Kerala. The key beneficiaries of the LMS training platform are the health professionals and supporting staff in the health system.

Scale of Stakeholder Engagement & Outreach

The stake holders played a key role in identifying the suitable platform and studied the scope of expansion in the service delivery. The stakeholders nailed down the entire process with accuracy and precision, pulled the trigger when necessary and double checked every standard that was set. When the need arrived, new ideas were hammered and chiseled out, sharp edges were sand down.

The service delivery was expanded in a phased need based manner.

Challenges and their management

Even the best-laid plans can suffer setbacks and the stakeholders were ready for problems when they arise. Some people were pessimistic about the plans, the stakeholders acknowledged the pessimism and addressed the resistance to change. The established work culture of the organization doesn't embrace change and even pushed against it.

Knowing what not to do is just as important as knowing what to do

Change Management

In the beginning, it is important to create, or affirm, a broadly understood need for a online learning platform especially considering the pandemic scenario. It is also critical to develop and communicate a vision of what the platform will look like, and periodic meetings with district officials were held to educate them on the importance of the LMS platform. Special administrative sanctions were issued from the state to ensure hassle free service on the LMS platform. To track the activities frequent review meetings were held with the technical team in CDIT and gap areas were identified and measures were suggested to close the gap. A state tam, led by the state nodal officer, is in charge of ensuring that services are delivered and that the sanctions given to acquire resources are spent wisely. The ultimate beneficiary of these services was the health professional and supportive staff in the existing

health system of the state and measures were taken to orient them regarding the LMS platform.

Key benefits/Value creation passed to key stakeholders such as government, citizens and business, community, economy, and environment. ‘

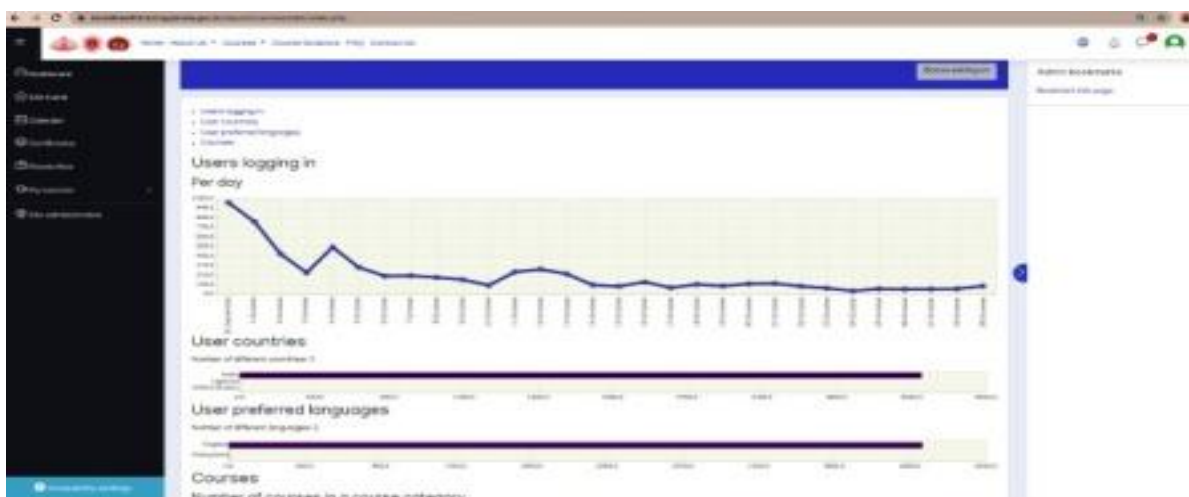
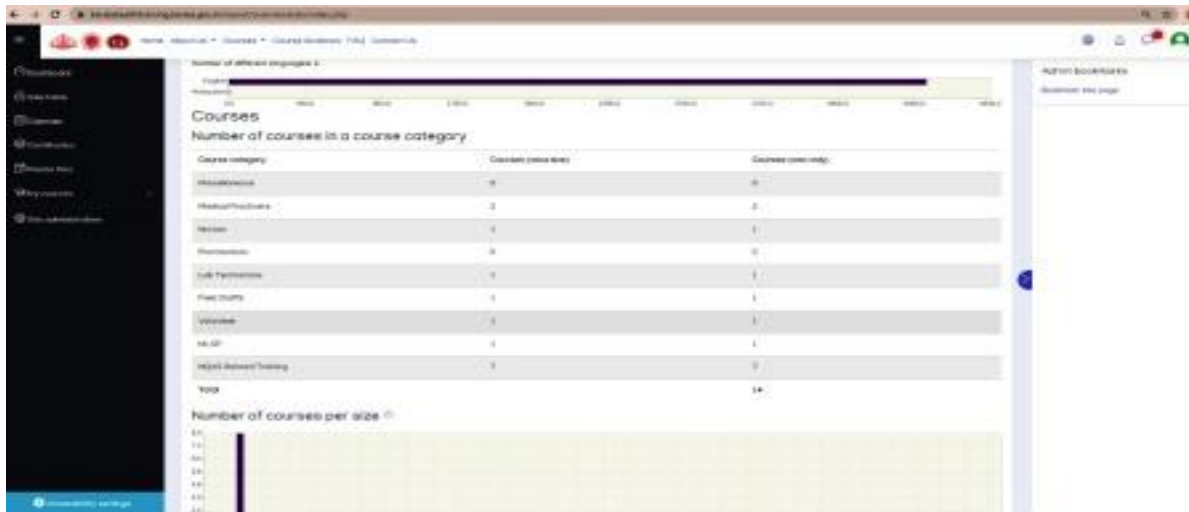
The LMS platform was launched in January 2021 during the COVID 19 pandemic to ensure hassle free training to the health professionals and supportive staff in the existing health system. The LMS platform has over 4000 beneficiaries. Offered at no cost to the beneficiary, this service has made it convenient for people to avail training without any hindrance to their routine duty and schedules.

Scalability

Scaling up is an integral part of any successful innovation and a framework for analysing scalability is critical for informed decision making. Horizontal and vertical scaling up is possible in telemedicine services. The scaling up is not one-dimensional here scaling up involves the enhancing quantitatively and functionality. The number of beneficiaries are the quantitative parameter while increasing the type of courses in the LMS platform is the functionality parameter to be considered while scaling up. To ensure sustainability of services vertical and horizontal scaling up initiatives are essential.

Geographic and Demographic Coverage





Other Efforts: Write a note on any special efforts the organization has taken up to ensure the success of the project

Frequent review meetings were conducted to monitor the progress. A robust communication channel was established with the technical team and the state team to ensure hassle free training for beneficiaries. Decision were taken to direct all the possible trainings through the LMS platform.

Why should an applicant win the award?

Since its inception utilization has increased over time.. Kerala may be the first state where a department has launched a LMS platform to ensure training and learning opportunities for health professional.

Anything else you think is important for Jury to know?

After piloting the platform, the State training division has up taken the next challenge to conduct MLSP trainings with 4-month duration in the platform. The main experienced challenges include increased duration of the program, activity-based curriculum, large number of the participants, adherence to the sessions etc. Training division and SHSRC planned an integrated curriculum for the same. The lecture module with continuous assessment modality were designed and implemented through the LMS. The course was a success in terms of result, Progressed 95% of the participants with excellent adherence and improvement in trainings. 21 Module was implemented through the platform (16 mandatory module and other non-mandatory modules). Second and third batch was enrolled for the training in platform. Final assessment and final clinical practical evaluation of the participants of the first batch were complete.