

Learning Management System (LMS) for Police Training Academies and Institutes under Digital India Programme

by

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ABSTRACT

With the changing landscape in police governance and continued evolution of technology, it is essential for the police force to be constantly equipped with new skills and knowledge to effectively contribute towards a digitally empowered India. To foster continuous learning, it is imperative to use technology in a way that learning and knowledge exchange becomes a normal engagement without external interventions [1]. Web-based or computer-based learning is easy to access anytime and from anywhere. It has, in fact, become a well-established, diversely applicable practice to use software applications for creating digital learning platforms. Learning Management System (LMS), a software application, designed under Digital India programme is one-of-its-kind to take forward the vision of competency based learning and is a tool to deliver right knowledge and skills to the right personnel. LMS, which is being implemented by National e-Governance Division (NeGD), will serve as a tool for learning and training to the police officers/officials who are involved in effective policing and administration in the States. This paper broadly discusses the significant facets of LMS which includes its relevance in achieving the vision of Digital India Programme, prominent features and framework, key benefits, implementation and services rendered as a consequence of implementation of LMS.

Categories and Subject Descriptors

2.2 [Transformation]: Government Change Management

General Terms

Management, Design, Experience, Training, Learning, Skill Development.

Keywords

Learning Management System (LMS), Change Management, and Competency Framework, Police work force, Capacity Building, Digital India.

1. INTRODUCTION

Learning Management System (LMS) 'is a software application that automates the administration, tracking and reporting of training events' [2].

LMS is a pioneer project under e-Kranti (an e-Governance plan initiated by the Government of India) as a part of Digital India Programme initiated by the Government of India in 2015 with a vision to transform India into a digitally empowered society and a knowledge economy by leveraging IT as a growth engine[3]. In line with this vision, it is widely recognised that there is a tremendous need to enhance the skill sets and to develop adequate number of appropriately trained resources for handling a variety of tasks [4] including those who are expected to design and deliver Government services to the citizens. National e-Governance Division (NeGD) is responsible for implementing the Capacity Building scheme intended to strengthen capacities within the Government departments at both Central and State level. The officials working in government organisations face a major challenge to find human resources equipped with specific skills and competencies in relevant areas, who can deliver Government services successfully. To overcome this challenge every department has to evolve its own Competency Framework (CF), which further acts as a baseline for developing the required training programmes with the objective - 'Deploy Right and Develop Right' [5]. These training programmes under Capacity Building scheme identify the right kind of training course for the right person that enables structuring the pre-defined job roles.

A competency framework identifies and outlines competencies, which are measurable by Knowledge, Skills and Behaviours (KSBs) essential for various job roles. The objective of moving towards competency based capacity building approach is to ensure that each job role is delivered by an official, who has the required KSBs for that role. To take this approach a step forward, a web-based Learning Management System in Governance is being developed to enable continuous learning, driven by role-based knowledge

and skills. LMS is a tool that allows efficient administration of training for various officials by bringing together learners/trainees and digital content in an environment that allows flexible learning and regular content update at a lesser cost than traditional form of imparting training.

The purpose of this paper is to explore the development and implementation of LMS for police training academies and training institutes. The paper delves into the fascinating journey of implementations of LMS in a Government organization, various challenges faced during the implementation and the myriad benefits offered to the Government officials PAN India, post its implementation.

2. LMS in Digital India

e-Kranti is a significant component of the Digital India programme intended to transform the manner in which governance is conducted and public services are delivered. In order to implement projects under e-Governance favourably, need was felt for a structured framework based on which e-Governance related competencies of the officials could be developed. This led to the designing of e-Governance Competency Framework (e-GCF), which is a major initiative helping in invigorating capacities and providing relevant training for the targeted Government officials. These identified and mapped trainings aim at pro-generating and leveraging competencies optimally as per the requirement. This competency-based training approach, simultaneously, provides a platform to e-Governance practitioners to understand the optimum skills and knowledge required for their job and determines their learning path. By providing germane training programmes and optimally deploying resources, the programme achieves its ultimate goal of advancing digital literacy to government officials all over India.

Therefore, LMS under Digital India is designed to build capacities of the Government officials, employing not only traditional but also innovative methods. LMS is a classic example that integrates four forms of learning namely classroom, e-learning, social and blended.

2.1. Features and Framework

According to several schools of thought, the focal point of e-learning rests with the design and structure of its platform.



Figure 1. Framework for LMS

The contemporary LMS has a host of features including reporting, provision of support tools, review and rating of assessments, and integration with other portals that makes it compendious. Keeping the ease and convenience of the users in mind, it provides an intuitive system of learning through a user interface that provides access to learning elements, simply with a few clicks. Apart from that, it also aims to provide access, and ensure stability and reach of learning for government officials, considering diverse training needs, methods of learning, cultures and priorities. The main components of LMS are as follows:

1. Digital India LMS portal

Supporting single-sign-on (SSO), this amalgamated portal provides access to various learning materials and threaded discussion groups to all police officers/officials across India.

2. Training Management

The system supports the management of all types of learning events, i.e. standard instructor led courses, e-learning courses, seminars and webinars.

3. Content Management

The system supports all types of customisable and deliverable content such as audios and videos, which can be accessed on a multitude of modern platforms and devices.

4. Authoring

The authoring module facilitates addition of content by various trainers and provides offline rapid authoring and the content generated is supported across most modern web browsers and operating systems. The other features of authoring tool include i) Rich environment-visually customise every element on the screen, ii) Task Management-streamline content development process, iii) Rapid Development-rapid course authoring, iv) Reusability-maintain reusable assets,

learning objects, widgets, etc., v) Interactivity – e-learning exercises and interactions, and create assessments, vi) Dynamic Navigation - simple page turners to sophisticated navigation schemes, and vii) PowerPoint Integration-convert powerpoint into e-learning course.

5. Other functionalities (including registration, nomination, and certifications)

LMS allows users to register and nominate for a course online. There are in-built certifications of completion, which are provided after the successful completion of a said course.

6. Virtual Assessment

Apart from providing all popular assessment types (multiple choice, true/false, etc.) and secure processing of assessments, it also has other features such as supporting randomised testing and maintenance of question banks etc. This too is supported over multitude of platforms and devices.

2.2 LMS Ecosystem

The LMS ecosystem is envisioned in such a way that roles are clearly defined for decision-makers, teams and committees.

For instance, NeGD has the responsibility to provide vision and strategy for implementation of LMS, define its comprehensive scope, give internal approvals, get periodical audits conducted and provide overall guidance to other stakeholders during the entire process of LMS implementation.

Similarly, roles are dubbed to other establishments such as LMS Advisory Committee, Content Task Force, System Integrator (SI), Content Development Agency, Training Delivery Agency and Project Management Unit (PMU).

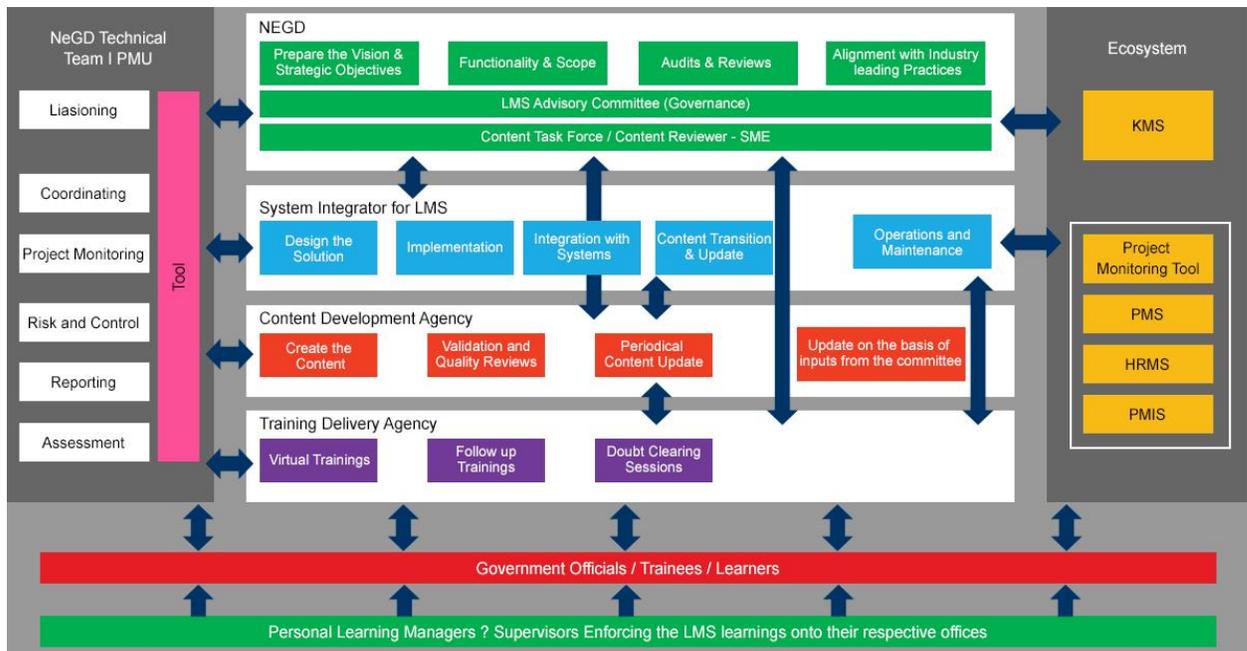


Figure2: LMS Ecosystem

3. METHODOLOGY

The project was envisaged with identification of the value proposition leading to visioning exercise for framing the objectives and expected outcomes of LMS implementation in NeGD, aligned with their strategic objectives. Detailed discussions were held with key stakeholders to capture the broad requirements for LMS. Based on the broad level requirements and work flows, an implementation partner was selected through an open tendering process. Further, the

implementation schedule was formulated that describes activity-wise timeframe for implementation of LMS. The requirements were further elaborated based on good features scanning across various organization (i.e. national as well as international). Since LMS is based on competency framework, efforts were made towards decrypting the competency framework. The three step process was followed including Knowledge Area grouping, Training Identification and Skill-Training mapping to design a

Skill-Training Matrix. Based on these requirements, the implementation is under progress and an impact assessment framework will be created that would provide feedback on content as well as other aspects of LMS.

4. LMS IMPLEMENTATION

LMS can be initiated under supervision of BPR&D and other police training organisations with the mapping of required roles as per police officers/officials competency framework along with their knowledge areas and skill sets. This will have to be undertaken to identify specific training needs for each cadre officials.

The training competency framework for designing the Skill-Training Matrix can be achieved by following a three pronged process. Step one should focus on grouping of Knowledge Areas. This includes identifying the Knowledge Areas for all the roles. These knowledge areas should be tagged together into 'Knowledge Groups' with the aim of identifying trainings, which would facilitate in bridging the knowledge area gaps for LMS users. In step two, unique 'Trainings' should be identified and listed based on Knowledge Areas and Groups. In case there are trainings that are recommended in competency framework and have not been identified in step two, those should also be included in the overall list of unique trainings. In step three, the identified unique trainings should be mapped with the various skills as mentioned in police officials' competency framework. This shall be undertaken to design a comprehensive 'Skill-Training Matrix'.

Subsequently, several deliberations may be conducted with concerned stakeholders in this regard. New ideas and inputs are being solicited following participative and an all-inclusive approach. Consequently, National Awareness Workshops are being planned to be held in various locations across India.



Figure 3: Knowledge Area grouping and decrypting e-GCF for LMS

During these workshops, LMS will be explained to the participants and their feedback/inputs will be taken regarding the mapping of roles with their specific knowledge areas and skill sets.

The participants for this workshop will include police officials, training teams, representatives of various

Police Administrative Training Institutes and Central Police Training Institutes. Apart from this, the integration of LMS and Knowledge Management System (KMS) is underway, where fraternizing of both the systems is being conceptualised including single-sign-on (SSO) feature.

5. KEY OUTCOMES EXPECTED THROUGH LMS

The NeGD implementation team has been working towards deployment of LMS in the targeted government set-up with activities such as conducting internal requirement gathering, taking feedback and reviews from stakeholders, intelligentsia, academia, and private agencies at multiple levels. The following outcomes are expected to flow after implementing and operationalising LMS for e-Governance.

The LMS platform will provide accessibility of quality standard e-Governance learning modules anytime, anywhere for all Government officials.

One of the key defining elements is to ensure continual learning. For this purpose LMS is expected to define the 'learning path' for police officials based on integration with Competency Framework. This integration and mapping will assist to achieve competency based training.

LMS will, at the minimum, be a one-stop-shop for all kinds of content related to self e-learning, instructor-led training and blended learning on police officials' related topics. It is expected to provide content to learners in a variety of exciting packages including e-reading material, presentations, assessments, videos, games and quizzes. Learners would also be able to participate in live webinar sessions using the integrated virtual training feature from any location. After the completion of a course/module, certificate of completion/credits will be offered to the learners.

It is expected to be a multi-user platform for learners/trainees, mentors, teachers and administrators. It will also provide a wide variety of periodic reports for the purpose of analysis and supporting management in decision making.

LMS is an evolving system, which is still in its nascent stage and over a period of time, it is expected to reap copious benefits for the government officials in providing right kind of training to the right person at an optimum cost.

6. CONCLUSION

LMS in e-Governance is a pioneer project under e-Kranti, under the Digital India Programme. It is a system envisaged to facilitate and enable continuous learning driven by role-based knowledge and skills as outlined in the Competency Framework. It is an effort towards efficient administration of training by bringing together learners and content in an environment, where flexible learning and regular content updates are available at an affordable cost.

Once fully functional, all training and competencies related to police officers/officials will be managed more effectively. A centralised approach for imparting and managing trainings will reduce efforts and costs significantly, while creating greater scope for learning opportunities.

It improves compliance reporting, since it can track the courses taken by various Government officials and the scores they receive or modules they complete. This aids in better management of identifying training needs and the delivery of requisite training modules.

Ultimately, LMS is expected to achieve a larger objective highlighted in the beginning of this paper to enhance the capacities and hone the skills of police officials. This leads to efficient delivery of services to the citizens and thus, supporting the vision of Digital India programme.

7. ACKNOWLEDGMENT

This paper is an implementation proposal of LMS deployment by NeGD to the BPR&D and other police academies for which NeGD's Capacity Building team is working diligently to successfully deploy a Digital India Learning Portal for Capacity Building activities envisaged by the Government of India. The paper has been the result of immense efforts and cooperation of various people and organisations.

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8. REFERENCES

1. Retrieved on 2 August 2016 from http://digitalindia.gov.in/newsletter/2016_july/index.php
2. Ellis, Ryann K. (2009), Field Guide to Learning Management System, ASTD Learning Circuits
3. Digital India, vision and vision areas <http://www.digitalindia.gov.in/content/about-programme>
4. NeGD LMS <http://negd.gov.in/learning-management-system>
5. NeGD, DeitY (December 2014), e-Governance Competency Framework (eGCF) for Digital India with Implementation Toolkit. First Edition.