Table of Contents

1.0 : Introduction & Background

In the last decade, Internet based education has increased substantially and technologies has improved learning substantially. Tremendous improvements in information and communication technologies and increase in the internet penetration brought lots of opportunities in different fields including education and training. Based on these new technologies, Universities and Academics are able to provide a wide range of training methodology options to trainees and learners. Distance learning is one such methodology which became very useful where students and instructors are in different geographical locations and time zones. Students can access information anytime at any place. It is very cost effective as many of these institutions become large-scale providers of distance education. In distance learning process, Learning Management Systems (LMS), also known as Virtual Learning Environments (VLE) plays a very significant role for faculty and training managers. In many organizations LMSs are being used to support and improve traditional ways of training. Higher education institutions can either develop in-house systems or opt for Open Source Software. We selected Moodle (www.moodle.org) open source learning platforms to built our LMS. Moodle is one of the most popular open source Course Management platform all over the world. Open source software foundations have enabled people all over the world to adopt information technology in all areas of work, without any recurring license cost. They also provide regular updates, for such Open Source software. NPA- LMS is completely based on open source platforms on both client as well as server side and there is no software license cost involved.

2.0 Overview

2.1: Project Title:

National Police Academy Learning Management System (NPA LMS)

2.2 Vision:

Sardar Vallabhbhai Patel National Police Academy Hyderabad (NPA) is responsible for training all IPS Officers at different stages of their career. Hence it is imperative for NPA to equip itself with world class training environment by exploiting technology. Its true, that technology can't replace human element of teaching & training but it can be a big force multiplier along with traditional teaching and training methodology. It provides one stop shop for all training related activities during training period in and outside NPA. Apart from allowing trainees to access all training materials in digital form at the time of their convenience, it also enable trainers to plan their schedule in transparent and consultative manner. It also removes any scope of ambiguity about deadlines as each and every activity will have date and time stamp. These days IPS probationers and MCTP participants have to undertake a lot of travel as part of their training. In such scenario this LMS also works as common broadcasting platform.

Once fully implemented, NPA training shall be completely digital without use of any paper. It will also create a digital repository of all the training materials which can be accessed

by future batches of trainees and new faculty members taking over that particular assignment. This will standardise the whole training of NPA. To achieve the above mentioned vision, We zeroed on Moodle Open Source Course Management Platform (www.moodle.org). Moodle is the most popular open source learning management platform which can be customised by using multiple plug in available.

3.0 The Project

3.1: Propose of the Project

NPA-LMS is Online Training cum Learning Management System primarily for all the IPS Probationers passing out of National Police Academy. The purpose of this System is to make it a single integrated platform for providing all the study material and assignments in digital form which can be accessed from anywhere over LAN or Internet over a training period of 2(two) years including 7(Seven) months of District Practical Training in different districts all over the country. This platform is also used by faculty members to upload all training material and evaluations of online assignments without any use of paper. All MCTP and In-service course contents data are also uploaded on this LMS. The access to different course is given to officers on need basis, once all training data are uploaded in it.

Features of NPA LMS:

- Self registration and Enrolment options for faculty and students.
- Adding/Deleting Courses by faculty / Course Manager.
- Set the different User Roles for different user group.
- Setting up the course calendar.
- Online Quiz.
- Upload and Retrieve Assignment and learning Resources
- Forum or Discussion module,
- Evaluate and Grade the students with the feedback
- Instant messages
- File download
- Online calendar

3.2: Sponsors: The whole project is funded from annual budget of NPA under IT head

3.2.1 Cost Implication

Sl. No	Particulars	Cost(Rs Lakh)
1	Hardware (2 Rack Server + Storage)	10
2	Software Customisation Cost	6
3	Manpower & Administrative Cost	5
	Total	21

Note:

- The Software cost is only for customisation of Moodle which may vary as per the requirement.
- Administrative cost includes consumables, power backup, network resources, training, etc.

3.2.2 Pre-requisite for Implementing Moodle based LMS:

- **Network Requirement**: LAN environment with client-server Architecture.

- **Man Power Requirement**: System Administrator with knowledge in Open source applications like Moodle, Virtualization, Operating System (Ubuntu, CentOS, RHEL, etc.) and sufficient experience of Web Portal Management.
- One competent person will be required to manage this LMS on day to day basis.

3.2.3 Hardware Requirement:
Rack Server (2) :- • Processor : Intel Xeon Processor with 8 core, • RAM : 32 GB RAM, • Hard Disk : 1TB Hard disk , • Additional storage :as per requirement • NIC Card: Two

3.2.4 Software Requirements: • Virtualization Application (KVM), Ubuntu 14.04 LTS (Operating system), MySQL 5.5 or above for database, PHP5 or more, Phpmyadmin, Apache web server.

3.3: Benefits:
This LMS made the whole Training Cycle completely paperless which itself saved a lot of recurring expenditure on stationery but more than the whole training management efficiency improve substantially and completely transparent.

4.0 Situational Assessment & Problem Assessment:
Before implementation of this digital platform all training material, curricula, feedback etc used to be in the paper form and any digital content like PPT, Training Videos etc were preserved in FTP server in a subject folder. But this folder becomes too much cluttered and search became difficult. Many data in paper form was difficult to locate as the same used to get lost in a number of files. For any faculty member getting all the information and data at one single place was too clumsy and very difficult to comprehend.

5.0: Critical Assumption & Constraints
It was assumed that all the faculty members and trainees will be comfortable with technology and will be using the new platform optimally. Since All training material are now only available in digital form trainees do not have any option. But a good number of faculty members are still using paper for their day to day work and their personal staffs uploading the data on the LMS platform after evaluation on hard paper.

6.0: Implementation Strategy

As a matter of strategy all sorts of training material in soft form were stopped. All Syllabi, Pre Course reading material, Classroom PPT & Video etc are uploaded on LMS. Earlier all Faculty members used to provide notes in paper form as reading and reference material. All trainees were forced to use this system initially. Trainees being more tech savvy adopted the new system very quickly. Few faculty members took time to get accustomed to the new system because of inertia and lack of IT aptitude.

Operationalization of NPA LMS

- All faculty members and Trainees are registered immediately after their joining in the Academy and unique user ID is provided for access.

- Adding/Deleting Courses by LMS Manager as per instructions of Course Director.

- Complete Indoor and Outdoor Training Manual of Basic Course Syllabi and Pre course study materials are up-loaded on this LMS subject wise.

- All indoor classes being conducted for IPS Probationers and In-service Course participants are video recorded and uploaded in this LMS along with Power Point Presentation and reference material if any as per schedule in organized manner.

- As a matter of policy of the Academy, fingerprints of all the IPS Probationers are recorded in the beginning of the course and all Biometric Attendance Data of Indoor Classes is automatically uploaded in the LMS for future reference viewing by both faculty and IPS Probationers.

- All assignments during their stay in the Academy for Phase-I and later during District Practical Training from districts all over the country is uploaded and assessed online completely in digital form without any use of paper.

- This platform is also being used to create knowledge depository of all the in- service courses being conducted in the NPA, like MCTP, Cyber Crime Investigation and other courses.

6.1: Derivables
1. No of courses uploaded on LMS
2. Percentage of Trainees & Course Coordinators using this LMS

6.2: Stakeholders
1. All Trainees
2. All Faculty Members
3. Training support staff of all the sections organising various training modules.

6.3: Related Projects

This LMS was standalone and self-sufficient module but it can be linked with another Project   called Knowledge Management System (KMS), which we started in NPA. This KMS

is meant for all IPS Officers of the country and LMS is for IPS Officers coming to NPA for training and there is a lot of scope of integrating both the systems.

6.4: <u>Future Plan</u>

Since this LMS was accessible to all the Trainees from outside NPA campus also over internet within few years this LMS will become the huge digital repository of learning resources on Police subjects and it can be used to run Online Courses for anyone interested in the subjects specially sub ordinate ranks of various Police Departments all over the country. At present most State Police Academy lack sufficient credible learning resources on police subjects. This repository can be a reference point for BPR&D or any State Police Training Academy for standardising their training modules.