# Dhamma Online Learning Platform

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**Abstract:** The Dhamma Online Learning Platform is a web-based educational system developed to facilitate accessible and structured learning of Buddhist teachings. It supports users of all ages and backgrounds in studying Dhamma principles, moral values, and meditation practices. To ensure secure and efficient management of learning resources, the platform is designed by using Role-Based Access Control (RBAC), a mechanism that defines access permissions based on the user roles. The system includes three primary roles: Administrator, Teacher, and User; each with specific privileges. The admin manages system-wide content and user activities, Teachers focus on delivering and assessing learning materials, and Users (learners) interact with the content based on their access level. By leveraging RBAC, the platform ensures security, scalability, and a tailored user experience. The system effectively removes barriers such as time, distance, and lack of structured guidance, promoting self-paced and accessible Dhamma learning through the technology online learning platform.

**Keywords**: Dhamma Online Learning, Role-Based Access Control, User Role Management, Permission Management, Learning Management System, Digital Learning Environment, Dhamma, Digital Learning.

## INTRODUCTION

In recent years, the integration of technology in education has transformed the way people access knowledge, including religious and moral teachings. Buddhism, with its profound emphasis on mindfulness, morality, and wisdom, continues to attract individuals seeking spiritual growth. However, geographical limitations, time constraints, and the lack of structured materials have made traditional Dhamma education difficult for many. To address these challenges, the Dhamma Online Learning Platform was developed. The platform offers a structured, self-paced approach to learning Buddhist teachings via the internet. Learners can access lessons, videos, chants, and quizzes at their convenience. The platform applies Role-Based Access Control (RBAC) to manage system functionality and safeguard user interaction. RBAC is a widely adopted security mechanism that assigns permissions based on the user roles, ensuring only authorized access to features and data. This paper presents the structure, roles, and implementation of the Dhamma platform and analyzes the effectiveness of RBAC in managing an online moral education system.

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## PROBLEM

Traditional Dhamma education typically requires physical presence at monasteries or Dhamma centers. In today's fast-paced world, many individuals, especially youths and working adults, struggle to find time for in-person classes. Furthermore, those living in remote or underserved regions lack access to qualified teachers and verified learning materials. Even when digital resources exist, they often lack organization, consistency, and trusted sources. Another challenge in digital education systems is user access control. Without a proper access management mechanism, the systems may become vulnerable to misuse, unregulated content editing, or data privacy issues. Thus, there is a clear need for the system that provides structured and easily accessible Dhamma content to support learners of all levels, ensures secure role-based content management to safeguard and organize information, and enables centralized control with effective monitoring of all learning activities to maintain quality, consistency, and progress tracking.

## APPROACH

The Dhamma Online Learning Platform adopts the Role-Based Access Control (RBAC) architecture with three roles: Administrator, Teacher, and User. Administrators oversee the entire system, managing lessons, videos, chants, assignments, announcements, certificates, user accounts, login activity, and feedback. Teachers contribute Dhamma content by level or topic, assess assignments or quizzes, provide guidance, and recommend resources. Users are learners who firstly register; log in, access learning materials, complete quizzes, submit assignments, track progress, and download certificates upon completion. The RBAC structure ensures secure, well-organized, and efficient platform operation, enabling smooth collaboration among administrators, teachers, and learners.

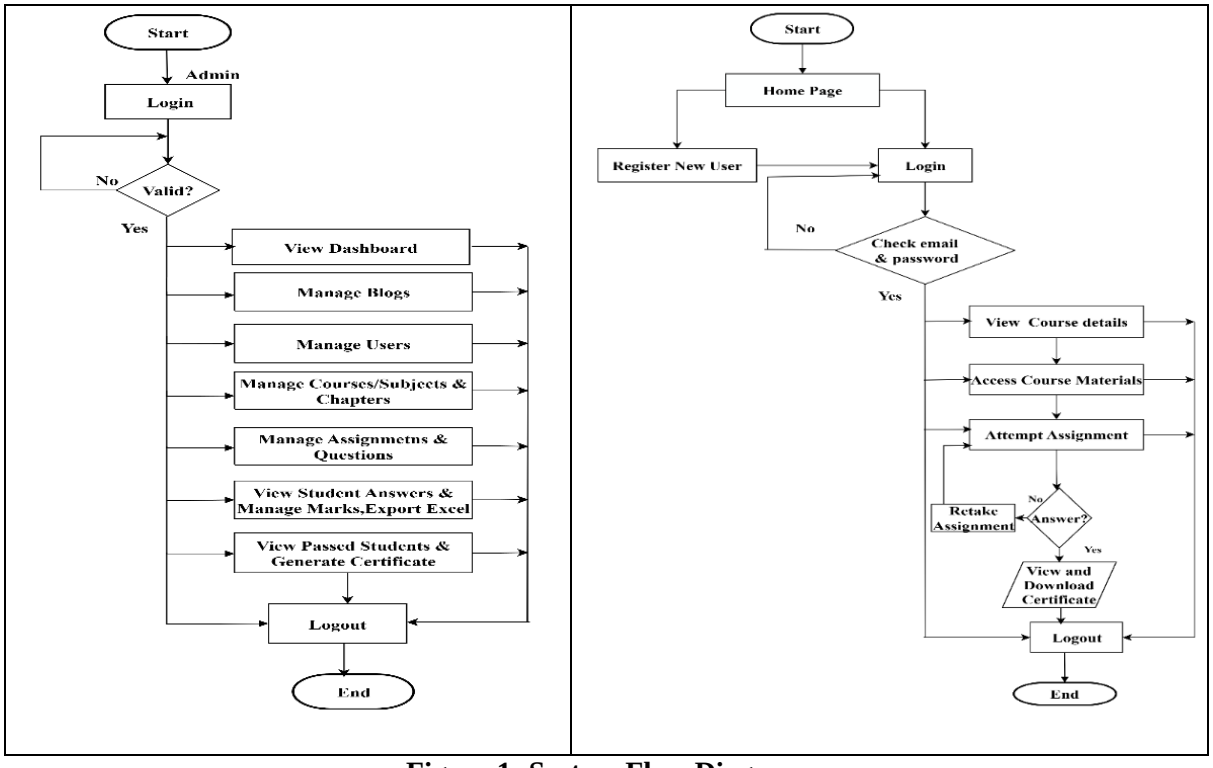


**Figure 1: System Flow Diagram**

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Figure 1 shows the Role-Based Access Control (RBAC) model of the Dhamma Online Learning Platform, defining permissions for Administrators, Teachers, and Learners. Learners can access content, complete activities, and track progress, but cannot upload or edit materials. Admins and Teachers manage lessons, videos, chants, announcements, and performance records, with access to detailed statistics.

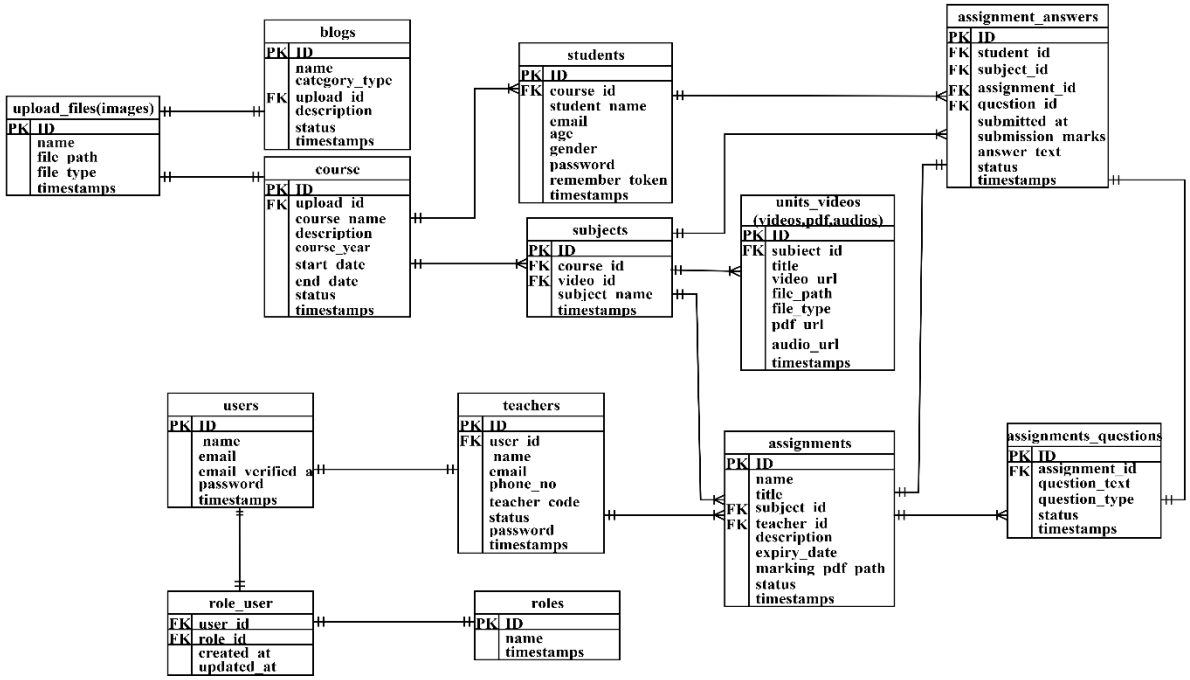


**Figure 2. Database Design**

Figure 2. shows using diamonds or lines. For instance, a “Student” entity might be related to a “Course” entity through a relationship called “Enrolls.” The system helps to define the structure and flow of data within the system. ER diagrams are especially useful in the early stages of database development. They serve as a blueprint to guide the creation of the database schema. By clearly defining all entities, attributes, and relationships, the diagram ensures that the final database will meet the application's requirements. It also helps everyone involve in the project, including developers, designers, and stakeholders, who understand how the data will be structured and utilized.

## RESULTS

The platform is developed using PHP, MySQL, HTML/CSS, and Bootstrap for a responsive front-end design. It offers a wide range of features to support the effective Dhamma learning. Lessons are organized into the categories such as moral values, meditation, the life of the Buddha, allowing structured studies. Multimedia resources, including Sayadaw videos and Dhamma stories enhance the user engagement and understanding. Assessment tools like assignments interactive worksheets help evaluate learners’ knowledge. Upon successful completion of learning modules, the users can receive downloadable certificates as the recognition of achievement. The platform also includes an announcement and news section

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where the admins can share updates on teachings, events, and new content. A secure login system with activity monitoring ensures the performance tracking and safety. Additionally, guest users can freely access general content such as articles and news without registration, while Admins promote open access to Dhamma knowledge.

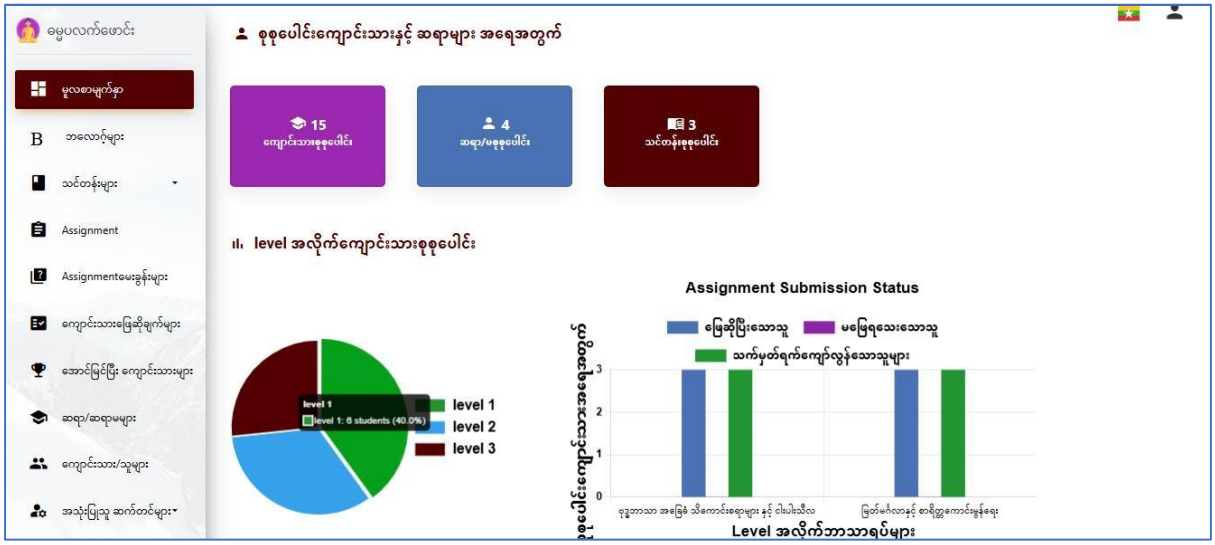


**Figure 3: System Administrator Dashboard**

Figure 3 illustrates how the Dhamma Online Learning Platform incorporates the Role-Based Access Control (RBAC) to ensure secure and efficient access to system features based on user roles. The platform categorizes the users into distinct roles such as administrators, teachers, and learners, each with predefined permissions tailored to their responsibilities. The approach enhances the system's security by preventing unauthorized access to sensitive content and management tools. It also improves usability by providing the users with a streamlined interface relevant to their role, thereby supporting focused learning experiences. As shown in the interface, the platform emphasizes Buddhist teachings and provides multilingual support, contributing to accessibility and broader user engagement. The adoption of the Role-Based Access Control (RBAC) in the Dhamma Online Learning Platform offers key advantages including enhanced security, scalability, usability, maintainability, and accessibility. It prevents unauthorized access, supports future growth, simplifies user interaction, separates administrative roles, and enables remote learning. However, the platform depends on the users having internet access and basic digital skills. Future improvements include mobile app integration and multilingual support.

## CONCLUSION

The Dhamma Online Learning Platform represents an innovative step toward digital Buddhist education. Through the use of the Role-Based Access Control, the system effectively manages content delivery, user interaction, and security. By empowering learners with structured, flexible, and accessible resources, the platform not only spreads Dhamma knowledge but also nurtures moral and spiritual development. The RBAC model ensures that content integrity and user roles are well-defined, making the platform sustainable and adaptable

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for future needs. With ongoing enhancements, the platform has the potential to become a central tool for global Dhamma education in the digital era.

## REFERENCES


1. M. K. Kabier, A. A. Yassin, and Z. A. Abduljabbar, "Towards for Designing Educational System Using Role-Based Access Control", International Journal of Intelligent Engineering and Systems, vol. 16, no. 2, 2023.

2. Pham Khanh, “Role-Based Access Control in LMS: A Comprehensive Guide”, published December 25, 2024.

3. V. Ratna, P. Khairnar, S. Bhardwaj, and R. Khatri, “Securing Academic Social Platforms: Implementing Role-Based Access Control (RBAC) in University-Based Digital Systems”, International Journal for Research Trends and Innovation, vol. 10, no. 5, May 2025.

4. Lynn Beighley and Michael Morrison “Head First PHP & MySQL”, First Edition, 2008.

5. Tom Butler and Kevin Yank, “PHP & MySQL Novice to Ninja”, 6th Edition, 2017.

6. “Ministry of Religious Affairs (Myanmar Govt.)”, URL: https://www.mora.gov.mm

7. Duckett and Jon, “HTML and CSS: Design and Build Websites”, 2011. ISBN: 978-1118008188.

8. Robbins and Jennifer Niederst, “Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphic (5th Edition)”, O’Reilly Media, 2018. ISBN: 978-1491960202.

9. Freeman, Adam, and Matthew MacDonald,” Pro HTML5 and CSS3 Design Patterns”, 2011. ISBN: 978-1430237806.

10. Duckett and Jon, “JavaScript and JQuery: Interactive Front-End Web Development”, 2014. ISBN: 978-1118531648.


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