# Construction of an Online E-Learning System

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***Abstract*—This thesis explores the development of an online e-learning system, focusing on the design and implementation of key functionalities. The author discusses the benefits and challenges of e-learning, as well as the necessary steps for its successful deployment. The system supports user registration, login, role-based access, course and news updates, and quiz functionalities. However, due to limited knowledge, the system did not fully meet all requirements. The study also examines the history and evolution of e-learning, its differences from traditional training, and the feasibility of transitioning to e-learning.**

***Index Terms*—e-learning, system design, object-oriented, database, ASP**

## I. Introduction

The thesis provides an overview of e-learning, its history, and its differences from traditional training. The author discusses the benefits and challenges of e-learning, emphasizing the need for a well-designed system to ensure its successful deployment. The study addresses the feasibility of transitioning to e-learning, considering the selection criteria, necessary tasks, and standards. The author also delves into the challenges of building and deploying an e-learning system, including the need for a comprehensive understanding of e-learning practices and the importance of adhering to relevant standards [1]. Related earlier ICTU undergraduate theses provide context for this English summary [7]. Published articles on the methods and subject of this project provide context for this English summary [8], [9], [10].

## II. Methods

The methods section includes a survey of e-learning practices in Vietnam, a problem statement, and a detailed analysis of system requirements. Use cases and object-oriented design models are developed, and database tables are designed to support the system's functionalities. The author conducted a survey to gather information on current e-learning practices in Vietnam, which helped in identifying the key functionalities required for the system [1].

## III. Results

The system successfully implemented user registration, role-based access, course and news updates, and quiz functionalities. However, due to limited knowledge, the system did not fully meet all requirements. The implemented system provided basic functionalities such as user registration, role-based access, course and news updates, and quiz functionalities. The database was designed to support these functionalities, with tables for courses, news, users, and quizzes [1].

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## IV. Discussion

The author acknowledges the limitations of the system due to limited knowledge and expresses a desire for feedback to improve the system. The thesis references several books and online resources for e-learning and software development. The author recognizes that the system's success depends on the feedback and support from educators and learners. The study references books such as 'The Unified Software Development Process' by Booch, Rumbaugh, and Jacobson, and online resources like 'diendantinhoc.vn' and 'manguon.com' for e-learning and software development [1].

## V. Conclusion

The system demonstrated basic functionalities such as user registration, role-based access, course and news updates, and quiz functionalities. However, the author recognizes that the system did not fully meet all requirements due to limited knowledge. The implemented system provided a foundation for an e-learning platform, but it lacked advanced features due to the author's limited knowledge and experience. The author hopes to improve the system by incorporating feedback and further developing its functionalities [1].

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