

Thesis Title	The Development and Study on the Effect of Distance Learning via the Internet in the Electric Motor Control Course.
Thesis Credits	6
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Degree of Study	Master of Science in Industrial Education
Department	Electrical Technology Education
Academic Year	2001

Abstract

The purpose of this study was to develop distance learning via the internet in the Electric motor control course and to find out the results of student learning by means of the asynchronous approach where the teacher and students were apart from each other in remote location and at different times. The advantages and disadvantages of this new learning environment were assessed through qualitative and quantitative methods. The two groups of sample were 52 second year students of vocational education who were studying in the field of Farm Machinery Technology and Industrial Technique at Rajamangala Institute of Technology Lampang campus.

The course was divided into 12 modules; Introduction to Motor Control, Control Equipment and Symbols, Drawing in Motor Control, Relays and Contactors, Motors Protective Devices, Overload Devices, Electric Power Supply, Three Phase Motors, Type of Motor Starting, Direct online Starting, Reversing of 3 Phase Motors, and Automatic Star-Delta Starter. Each module used varieties of interaction with learners such as illustrated working simulations of the equipment and the circuits. They also provided for self-directed learning which is available anytime, anywhere.

The course was convenient, accessible, and user-friendly. The activities and learning components consisted of homework assignments via E-mail, Bulletin boards, Guestbooks, Poll votes, a Chat room, Search-engines, Related web sites and Downloads. These tools enabled the students to collaborate in a learning environment.

The academic achievement results at the end of the course found that both sample groups achieved significantly higher scores. There was no statistically significant difference between the two sample groups of students. Additionally, most of the students were satisfied with the course and felt comfortable using the tools provided.

It was also found that the teacher had to introduce basic skills for using the Internet and distance learning methods to the learners. Those who mastered the new computer skills were able to learn faster and more effectively. Such Internet facilities should be made available to all students and also teachers should be trained in these new methods.

Keywords : Distance Learning/Distance Learning via Internet/e-learning /WBI /Simulation/
Web-Based Learning/Web-Based Instruction/Electric Motor Control/
Motor Control/WWW/Internet/Website/Web