Thesis Title	The Development of Teaching Strategy for a Learning Structure on the AC. Inductance in a Single Transmission Line
Thesis Credits	6
Candidate	Mr.Sanam Sukharome
Supervisors	Dr.Choosak Plienpoo
	Associate Professor Chalermpol Namkang
	Assistant Professor Praophan Plienpoo
Degree of Study	Master of Science in Industrial Education
Department	Electrical Technology Education
Academic Year	1998

Abstract

This research was undertaken to develop a learning-structure teaching model. The researcher intended to evaluate instructional efficiencies achieved from the model develpoed on the AC. Inductance of a Single Line. The content was prepared in two different structure : the Text-Oriented and the Learning-Processed structure.

Relevant principles and concepts of transmission-line were extracted and formed into a learning-structure content. Lesson plans employing Gagne's and Concept instructional theories were developed for teaching and learning activities. Three teaching strategies : Direct Presentation, Concept Formation, and Multi-levels questioning techniques incorporated with well-constructed media were utilized in teaching.

Teaching efficiencies were evaluated by 55 multiple choice items. The tests were constructed from data obtained from the analysis of content and objectives. Item analysis was performed giving the following qualities : average discrimination power of 0.39, average difficulty index 0.46 , and reliability of 0.87 . All instructional medias : content structure, lesson plan, and test items were unanimously approved by content experts.

The instructional plans were finally experimented with 61 second-year students at Taluang Technical College. Thirty-one students randomly chosen as the experimental group was taught with learning-structured content, and other thirty - one students treated as control group was taught learned with text-oriented content. Pre-test and post-test were also executed accordingly.

It was found from a statistical T-test that the teaching with a learning structure yielded a better cognitive results. The analysis also revealed that learning structured content gave better achievement on the comprehension and application at a level $p = 0.01$. No significant differences, however, was found on the knowledge level.

Keywords : Learning Structure / Higher cognitive / Principle's Gagne'