

# **An Intelligent System Approach to Assist the Curriculum Design in IT Vocational Teacher Education**

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## **ABSTRACT**

A good quality curriculum involves out of hard dedicated and intelligent work conducted on continuous bases. Curriculum construction, design, and implementation is a continuous process influenced by curriculum evaluation which enables on-going improvements to curriculum design. Curriculum design is not an easy process. This process involves issues of educational objectives, people, procedures, and participation. It relies on relationships and organization and these features capture the human element of the process recognizing. It is an organizational and decision-making process that ultimately informs the development process.

This research conduct to solve the problem in developing curriculum. The aim of this research is to design a model of intelligent-based systems that can assist in the curriculum design process. In this context, the system is aimed at helping curriculum designer to develop comprehensive institutional IT vocational teacher curriculum.

The objective of this research is to define an ICT competency framework as a guideline for the institution organizing higher education in Technical and Vocational Education and Training (TVET) teacher. This framework helps the TVET institution in developing the curriculum and lesson plans to improve the quality of education and graduates. The proposed framework consists of IT Competence Curriculum Model, Mapping Pattern and Curriculum Design Software. The ICT Competence Curriculum Model is the integration of three (3) important components of curriculum development in IT education field, namely IT industry standard, KKNI (National Indonesia Qualification Framework), and TVET Competence Model. Based on the resulting framework, the research is continuing to develop Mapping Pattern for connecting between the core Learning Outcome into the curriculum and lesson plans. Mapping Pattern will become the platform of Curriculum Design Software. This software is a tool that can produce a recommendation in curriculum design in accordance with national standards that have good quality.

*Kata Kunci: IT Competency Framework, IT Industry Standard, TVET Competence Model, Mapping Pattern, National Indonesia Qualification Framework.*