

Correspondences Between the Special Project Courses in the Universities and the Need of Industries: A Study Case in the Field of Mechanics

Jyh-Lung Tang & Ming-Fu Huang*

This study aimed to analyze the correspondences between the special project courses in the universities and the need of industries in developing innovative abilities in the field of mechanics. Applying the method of field interviewing, this study targeted eight universities in southern Taiwan. This study investigated: the subjects of the courses and the application of the special projects, along with the types of products, innovative abilities, incubation methods, and teaching methods developed in the industry-university cooperation. The results of this study included the following. First, the special project courses in the universities tended to focus on the field of computerized simulation in automatic control. Second, the industry-university cooperation plays a crucial role in corresponding the demand and supply of mechanical engineers. Third, the research team members of special project courses were mainly directed by the faculty of the universities. Fourth, it is necessary for both universities and industries to have evaluation tools to facilitate the use of innovative human resources demanded by the knowledge-based economy. These results further provided suggestions for courses to cultivate the innovative abilities of the industries and the students in the vocational and technical institutes.

Keywords: *mechanic field, special project courses, domain creativity, innovative abilities*

* Jyh-Lung Tang: Professor, Department of Business Administration, China Institute of Technology

Ming-Fu Huang: Teacher, National Taitung Junior College; Ph. D. Student, Department of Education, National Taitung University