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| <b>Thesis Title</b>      | A Study of the Development Needs for Teachers of Machine Shop as CNC Technology, Technical Colleges, Northeastern Region |
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### **ABSTRACT**

The purpose of this research was to Study the needs of the Teachers in Machine Shops of the Northeastern Region Technical Colleges in three major improvements and functions. (Enhancement): the development in the basic knowledge of CNC technology, the creation of the development methods, and the comparison the needs of other teachers with different years of teaching experience.

This Study was conducted among 188 Teachers in Machine Shops and Production Technology Departments of the Technical Colleges in Northeastern Region. The analyst received 183 (97.3%) questionnaires, data analysis, utilized percentage, arithmetic means and Standard Deviation of dispersion with SPSS/PC+ (Statistical Packages for the Social Sciences/Personal Computer Plus)

Research results were as follows :

1. The Development needs for Teachers of the Machine Shops and Production Technology Departments in the Northeastern Region Technical Colleges in three specific enhancements were found that :

#### 1.1 Basic knowledge enhancement.

The needs of teachers to development basic knowledge were in medium level. The average mean of the needs was high in Windows and Dos application systems, principles of basic computer application, symbols used in basic computer systems, commands for basic computer application and functions, and principal components of Microcomputers.

#### 1.2 Knowledge of CNC technology.

The needs of the teachers to development their knowledge of CNC technology were in high level. The average mean was the highest on Software Programs, and the systems of the Structure and Control for CNC Machines (Hardware).

In addition, the Software Programs were in the highest needs on the correction of the data Programs while the entering (input) of data programs were lower. The Control systems of CNC Machines (Hardware) were in the highest needs, but the Structures of the Control systems were lower.

#### 1.3 Creative Development Methods

The Teachers needs of the development were the highest level in all aspects especially in sending teachers to theoretical and practical teaching institutes for training the performance on CNC technology. The lower level of needs was to prepare the complete computer programs as the teaching aids of CNC providing a good data of explanation, presentation, entering data, demonstration, graphic collection and collection of the results for using in the departments. The machine shops also provided short-term Curriculum to improve their knowledge of CNC Technology.

#### 2. Comparison results.

The Teachers need a classified accord for their years of teaching experience. Their needs in basic knowledge of CNC Technology and the Methods of the development were not different.