

STUDENTS' PERCEPTIONS OF THE ADEQUACY
OF THEIR TRAINING IN MACHINE SHOP TECHNOLOGY
IN FIVE STATE-SUPPORTED COLLEGES IN WESTERN VISAYAS



A Dissertation

Presented to

the Faculty of the School of Graduate Studies
Central Philippine University

PHOTOCOPYING NOT ALLOWED

In Partial Fulfillment
of the Requirements for the degree
DOCTOR OF EDUCATION

by

RENATO V. ALBA

1987

CHAPTER I

INTRODUCTION

The human resources of the nation in general and the region in particular affect the pace and character of economic and social development of a nation. The crucial role of human resources in the development efforts was emphasized by Harbison and Myers when they asserted ~~that~~:

The wealth of a country is based upon its power to develop and effectively utilize the innate capacities of its people. The economic development of nations, therefore, is ultimately the result of the human effort. It takes skilled human agents to discover and exploit natural resources, to mobilize capital, develop technology, to produce goods, and carry on trade. Indeed, if the country is unable to develop its human resources, it cannot build anything else, whether it be modern political system, ¹a sense of national unity, or prosperous economy.

In the Philippines, there is a need to develop engineers, scientist, technologists, technicians and skilled workers, in the right quantity and of the right quality to match the requirements of the new government's program for socio-economic development which places emphasis on economic recovery in the short run

¹ Frederick H. Harbison and Charles A. Myers, Manpower and Education (New York: McGraw-Hill Company, 1965), p. 9.

and sustained growth in the medium and long run.² The manpower required to support this development program may be developed by formal education, non-formal education and informal education.

In Western Visayas (Region VI), a balanced agro-industrial development strategy is being pursued, with economic recovery and the attainment of sustainable economic growth as the overriding development concern.³ The thrust of development is agriculture supported by industrial and other sectors. The strategy for the industrial sector states that:

The industrial sector shall be supportive of the agricultural sector and shall foster stronger agro-industrial linkages with the establishments of more agri-based processing industries to ensure development in the rural areas. With the achievement of rural development a sound foundation for industrial growth can be established. Also, a climate more conducive to manufacturing shall be created by bringing down inflation and interest rates on borrowed capital, lowering cost of production inputs and minimizing government intervention in the private sector. To arrest poverty and create income, priority will be given to increasing the number of small and medium scale industries. The industrial sector is seen to grow from 2.14 per cent in 1987 to 8.26 per cent in 1992.⁴

² Daily Express, June 19, 1986, p.1.

³ Philippines (Republic). Western Visayas (Region VI) Six-Year Development Plan, 1987-1992 (Iloilo City: NEDA) p. 3-1.

⁴ Ibid. p. 3-7.

The Regional Manpower Plan, Western Visayas, 1983-1987,⁵ identified the manpower requirements of the region by sectors. From this Regional Manpower Plan, it can be gleaned that what remains to be done is to identify the specific skills and competencies needed by manufacturing and service industries especially among middle level manpower, the technicians and skilled-workers.

This need for quality technicians and skilled-workers can better be appreciated if we look at some of the problems encountered by the employers. In Region VI as cited by the National Manpower and Youth Council (NMYC), the automotive industry could not attain higher productivity because it is handicapped by a general lack of skilled-workers. The NMYC stated that:

Although the region's vocational/technical schools and other training institutions produce around 2,000 automotive technicians per year, employers complain of the inadequate preparation of these graduates. Newly hired workers still have to spend some time to learn the work through on-the-job training, making employers incur additional expenses in terms of training materials used, time spent, and wages paid.⁶

⁵Philippines (Republic). National Manpower and Youth Council, Regional Manpower Plan, Western Visayas, 1983-87 (Iloilo City: NMYC, 1983).

⁶Philippines (Republic), National Manpower and Youth Council, Sectoral Manpower Plan, WV, 1984-1987, Automotive Industry (Iloilo City: NMYC, Region IV, 1984), p. 8.

This assertion of the NMYC confirmed the perceptions of employers as reported by Bringas in a study which revealed that employers did not encounter difficulty in recruiting new graduates. Their difficulty lies in the quality of graduates. "The firms which encountered difficulty seemed to think that the quality of manpower available did not suit their demand." He asserted that this further stresses the need to develop a curriculum which enables the students to be exposed to the working conditions they would encounter when they eventually get employed.⁷

The findings of the Presidential Committee to study Vocational/Technical Education underscored curriculum relevance when it lamented that:

The issue of curriculum relevance remains a big issue in vocational/technical education. It was pointed out that there are many cases where there is no demand for the types of skills being developed in vocational/technical schools and that courses are offered whether or not there is a need⁸ for them in the areas served by these schools.

A recent industry-education linkage study showed that there is an apparent demand for technicians in the areas of: (1) electrical technology, (2) electronics technology, (3) automotive technology, (4) refrigeration

⁷ Noli Bringas, "The Higher Education System and Labor Market as Perceived by Employers," FAPE Review, 10(.3-4): 91-118, January/April 1980.

⁸ FAPE, "Major Issues and Problem Areas of Vocational Education" FAPE Review, 2(1), 17-23, July 1980.

and air-conditioning technology, (5) carpentry and construction technology, (6) mechanical technology, and (7) welding and fabrication technology.⁹

The growing demand for technicians in the fields mentioned above and the problems facing our vocational/technical education have influenced our government to secure a loan from the Asian Development Bank in November 1981 for the upgrading of twenty-three (23) industrial technical institutes. The government of the Philippines and the Bank representatives signed Loan Agreement No. 531-PHI covering US \$38.5 million broken down into a US \$27M Bank Loan and US \$11.5-M Government of the Philippines counterpart fund. The loan package is known as the Technical and Vocational Education Project (ADB LA No. 531-PHI)¹⁰, More specifically, this project, according to the official Newsletter of the Project Management Unit, came about because of the weaknesses and problems of technical and vocational education sub-system, as quoted below:

. . . the technical and vocational education subsystem must prudently and consciously deal with the cohorts of weaknesses and problems which current and recent studies, surveys and results of major conferences have identified, foremost of which are: (1) no efficient guide-

⁹ Daily Express, March 22, 1985, p. 6.

¹⁰ Philippines (Republic) Ministry of Education Culture and Sports Technical/Vocational Education Project, "TVEP: Impetus to Upgrading Technician Education", TVEP Update, October 1983, p. 1.

lines to indicate the direction and occupational training standards in technical and vocational development: (2) sub-standard quality of teacher and technician training programs which have wide variations between and among schools due to curricular variations, inadequate facilities, equipment and tools; (3) no tie-ups and arrangements with the industry sector to identify training skills developed at the technical institution; and (4) lack of systematic staff development and pay incentives for teaching and non-teaching personnel.

There are two institutions involved in the project in Western Visayas. These are the Western Visayas College of Science and Technology in Iloilo City and the Paglaum State College in Bacolod City. Under this project, the Western Visayas College of Science and Technology is allowed to offer (1) Automotive Technology, (2) Electronics Technology, (3) Mechanical Technology, and (4) Refrigeration and Air-Conditioning Technology. The Paglaum State College, on the other hand, is allowed to offer the following courses: (1) Electronics Technology, (2) Electrical Technology, and (3) Mechanical Technology. All these courses were first offered under the Diploma in Industrial Technician before the program was revised into the Three-Year Diploma of Technology. These two state colleges are offering also the two-year trade-technical courses which are at the same time sources of skilled workers and industrial technicians to meet the manpower requirements of our industry in the region. There are other state-supported colleges and schools which offer similar

technical courses to what these state colleges are offering. These schools are encountering similar problems as earlier mentioned, especially the lack of tie-up and arrangements with the industrial sector to identify training needs and to ensure marketability of technical skills developed at the technical institutions which led to this study.

A. THE PROBLEM

Statement of the Problem

The main purpose of this study was to find out the students' perceptions of the adequacy of their training in Machine Shop Technology on the knowledge and skills required of machinists in Western Visayas. More specifically, the study sought to answer the following questions:

1. What are the perceptions of students who underwent on-the-job training (OJT), of the adequacy of their training on the knowledge and skills required of machinists in the performance of their jobs in a particular occupation in machine shop in Western Visayas?

2. What are the perceptions of students who did not undergo on-the-job training, of the adequacy of their training on knowledge and skills needed by machinists in the performance of their jobs in a particular occupation in machine shop in Western

Visayas?

3. What are the perceptions of the students about operating/running and or working conditions of the machines, equipment and tools that are available to them during their shop or laboratory instruction?

4. What are the students' perceptions of the accessibility or availability of the machines, equipment and tools during their shop instruction?