



**UNIVERSITI PUTRA MALAYSIA**

**TEACHING COMPETENCY NEEDS OF VOCATIONAL  
AGRICULTURE TEACHERS AS PERCEIVED BY VOCATIONAL  
AGRICULTURE TEACHERS AND ADMINISTRATORS IN THAILAND**

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**DOCTOR OF PHILOSOPHY  
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**1991**



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By

PEERAPONG TIPANARK

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By

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December 1991

Supervisor : Dr. Abdul Patah Abdul Malek

Faculty : Faculty of Educational Studies

The purpose of this study was to determine the teaching competency needs of vocational agriculture teachers at the agricultural college level in order to provide information as input to programme planning of agricultural education in Thailand.

Data were gathered from 304 vocational agriculture teachers and 180 administrators in the 43 agricultural colleges in Thailand. Two instruments were constructed to gather the data: (1) an eight item questionnaire regarding the teachers' and the administrators' personal characteristics backgrounds; (2) a 76 item inventory of vocational agriculture teachers' teaching competencies covering five competency areas.



Data collected from the inventory were analysed to determine in-service programme need priorities. The respondents were requested to rate the competencies on a five-point Likert-type scale for the level of importance and attainment. In order to determine need priorities, a need indicator score was calculated for each item by dividing the square of the importance rating by the attainment rating. Finally, for the ratings of importance and attainment, the need indicator score was arranged in rank order for both the respondent groups according to items and competency areas. Spearman's Coefficient of correlation was used to calculate the level of agreement between the groups' rank order. In addition, correlational analysis was carried out to determine the relationships between some selected personal characteristics of the teachers and their teaching competency needs.

The major findings of the study were as follows:

1. There was strong agreement in the groups' importance and attainment ratings on the inventory of teaching competencies.
2. All the 76 teaching competencies were important for the vocational agriculture teachers in order to teach effectively at the agricultural colleges in Thailand.



3. Only eight competencies were considered high need priorities for the vocational agriculture teachers.

4. There was a significant relationship between sex and the vocational agriculture teachers' teaching competency needs.

Based on the interpretation of the findings, the following major recommendation was made: there is a core of eight competencies for which the teachers had high need, and these competencies must be focussed on in programme planning for the improvement of vocational education in Thailand.



Abstrak tesis yang dikemukakan kepada Senat Universiti Pertanian Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah.

KEPERLUAN KEMAHIRAN MENGAJAR GURU VOKASIONAL  
PERTANIAN SEPERTI YANG DIMENGERTIKAN OLEH GURU  
DAN PENTADBIR PERTANIAN NEGERI THAI

oleh

PEERAPONG TIPANARK

Disember 1991

Ketua Penyelia : Dr. Abdul Patah Abdul Malek

Fakulti : Fakulti Pengajian Pendidikan

Tujuan kajian ini ialah untuk menentukan keperluan kemahiran mengajar guru Vokasional Pertanian di aras Kolej Pertanian bagi menyediakan maklumat sebagai input kepada perancangan program Pendidikan Pertanian di Negeri Thai.

Data dikumpul daripada 304 orang guru Vokasional Pertanian, dan 180 orang pentadbir di 43 buah Kolej Pertanian di Negeri Thai. Dua instrumen telah dibentuk untuk mengumpul data: (1) soal selidik lapar item mengenai latar belakang ciri personal guru dan pentadbir berkenaan; (2) inventori 76 item mengenai kemahiran mengajar guru Vokasional Pertanian meliputi lima bidang kemahiran.

Data daripada inventori dianalisis untuk menentukan keutamaan keperluan program dalam perkhidmatan. Responden





- 3) Hanya lapan kemahiran dianggap mempunyai keutamaan keperluan yang tinggi bagi guru Vokasional Pertanian.
- 4) Wujud perhubungan yang signifikan di antara seks dan keperluan kemahiran mengajar guru Vokasional Pertanian.

Berlandaskan penafsiran dapatan, cadangan berikut dibuat; ada lapan kemahiran yang sangat diperlukan oleh guru berkenaan, dan kemahiran-kemahiran ini hendaklah diberi tumpuan dalam perancangan program untuk mempertingkatkan pendidikan Vokasional di Negeri Thai.



diminta memperingkat (to rate) kemahiran satu skala lima mata jenis Likert untuk menentukan aras kepentingan dan aras pencapaian.

Untuk menentukan keutamaan keperluan, markat petunjuk keperluan dikira bagi setiap item dengan membahagi pemeringkatan kepentingan yang diganda dua oleh pemeringkatan pencapaian. Akhirnya untuk pemeringkatan kepentingan dan pencapaian, markat petunjuk keperluan diatur dalam satu aturan pemeringkatan untuk kedua-dua kumpulan responden mengikut item dan bidang kemahiran. Pekali korelasi spearman telah digunakan untuk mengira aras persetujuan di antara susunan pemeringkatan kumpulan tersebut. Sebagai tambahan, korelasi dijalankan untuk menentukan perhubungan di antara beberapa ciri personal guru berkenaan yang terpilih dengan keperluan kemahiran mengajar mereka.

Dapatan utama kajian ini adalah seperti berikut:

- 1) Wujud persetujuan yang kuat mengenai pemeringkatan kepentingan dan pemeringkatan pencapaian di antara kumpulan tersebut pada inventori kemahiran mengajar.
- 2) Kesemua 76 kemahiran mengajar penting untuk guru Vokasional Pertanian untuk mengajar dengan berkesan di kolej-kolej pertanian di Negeri Thai.

CHAPTER I  
INTRODUCTION

An Overview of Thailand

Thailand, known as Siam by the western world from the earliest contacts until June 1939 and again between 1945 and, 1 May 1948, is called locally and officially as Prathet Thai or Muang Thai, meaning "Land of the Free". It is a tropical Southeast Asian country which occupies an area of 513,115 square kilometers or 198.455 square miles (Center for Agricultural Statistics, 1987). Its location is 5 to 20 degrees N latitude and 95 to 105 degrees E longitude. The average temperature ranges from 23.7 to 32.5 degree Celsius (Office of the Prime Minister, 1986). The shape of the land area looks like an axe with a long handle that extends southwards to Malaysia. To the northeast, the Mae Khong River separates Thailand and Laos, the northwest mountain range separates Thailand from Burma. Across the southeast border is Kampuchea.

Geographically, the country consists of 73 provinces and is divided into four regions (Fisher, 1965); the northern region is mountainous with fertile valleys and plains suitable for growing rice and teak. The central region is located in the fertile Chao Phraya basin and it is here that Bangkok,



the capital city of Thailand is situated. The northeastern region is the driest part. Its long dry season and relatively scarce rainfall make it the least productive region in the country and also the least modernized. The southern region is moist and prosperous with rubber trees, tropical crops and tin deposits.

The main agricultural products are rice, rubber, corn, sugar cane, cassava, livestock, poultry, and fishery products. Agriculture in Thailand is regarded as a fundamental source of income for the national economy. In 1985, agriculture contributed about 17.4% of the gross national product, provided over 59.5% of the country's export and employed around 61.34% of the national's total labour force (Division of Policy and Agricultural Development Plan, 1986).

Thirty-three million farmers, who are approximately 64% of the total population of 52 million (Division of Policy and Agricultural Development Plan, 1986) live in the rural area in homogeneous groups along rivers, canals, and roads. They have their farms not far away from home. Of the country's total area, about 38% is under cultivation, with some 20% of this presently under irrigation. This land, both irrigated and non-irrigated, is used by some 5.8 million farm families to produce agricultural goods for domestic consumption and export (Department of Agricultural Extension, 1985). Each family has an average farm size of



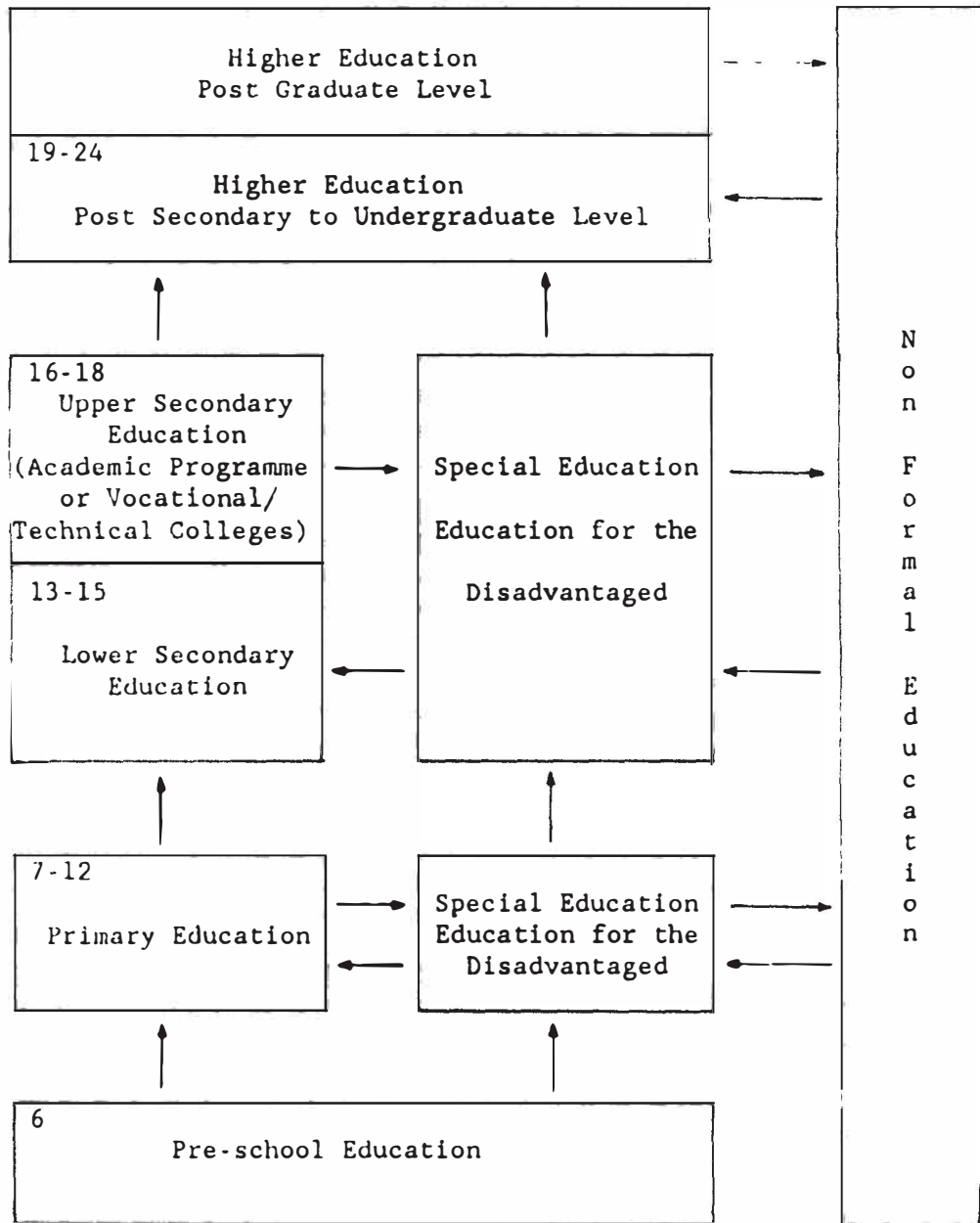
10.55 acres. The total farm land holding is 51,441,308.8 acres (Center for Agricultural Statistics, 1987).

The official national language is Thai, the dialect spoken by the inhabitants of Bangkok and the central region. Other languages are Chinese and Malay. English is a required subject taught in secondary school and is an elective in the primary school. Most of ethnic minority groups in Thailand are bilingual. Buddhism is the national religion of Thailand. It is tremendously influential in ceremonies and all aspects of life. Approximately 95% of Thais are Buddhists (World Almanac, 1987). The other religions practiced are Islam, Christianity, and Hinduism.

#### **Educational System in Thailand**

According to the 1977 National Education Scheme, the educational system of Thailand is divided into 4 levels, namely, pre-primary, primary, secondary and tertiary levels. The structural arrangement in terms of time required to complete each level is 1-3 years for pre-primary education, 6 years of compulsory primary schooling, 3 years of lower secondary and 3 years of upper secondary education, and 4-6 years of higher education. From the elementary through lower secondary grades the curriculum is the same for all students except that there are more elective subjects in lower secondary schools offered to the students. After the students have finished lower secondary education they may choose to continue their education on to the upper secondary grades for

an academic programme or enter vocational/technical schools or colleges for 3 more years. The division between these two programmes is clear cut and non-transferrable. After the upper secondary grades or certificate in vocational education, several vocational and specialised forms of education are available. These include teacher education, higher certificate and diploma in vocational, technical education, other professional studies in colleges and universities as well as institutes of technology which offer degree programmes for transit students who hold higher certificate or diploma in vocational and technical education. Throughout the continuum of the educational scheme, non-formal education is available in both general academic and vocational training programmes to provide wider opportunities for school leavers and out-of-school youth and adults to acquire knowledge and skills needed for future employment or to improve their living condition (SEARRAG, 1987). The different levels of education and their relationships are presented in Figure 1.



Approx.  
Age.

Figure 1. Educational System of Thailand  
(Source: Ministry of Education, Bangkok)

## Vocational Education in Thailand

According to the 1977 National Education Scheme, students in secondary school may choose to follow academic or vocational courses following the completion of the lower secondary level. Those who choose vocational courses enter vocational school or college to pursue a three year programme leading to the Vocational Certificate called in Thai as Paw-Waw-Chaw (P.W.C.). Vocational schools and technical colleges provide vocational/technical training in five areas. These areas are Agriculture, Trades and Industries, Commerce, Home Economics, and Arts and Crafts. Upon completion of this training, the P.W.C. graduates are expected to enter the labour force as middle level manpower.

Agricultural education is provided in both academic and vocational streams. The academic stream is administered by the Department of Elementary School Education of the Ministry of Education. The knowledge of agriculture is integrated in all subjects related to experience development, namely in environmental studies, natural science and career education in the last two years of schooling. In the secondary schools, administered by the Department of General Education, agricultural subjects are offered as elective courses. At this level, under the 1978 Lower Secondary Education curriculum, it is prescribed that the agricultural subject be in the grouping of work experience and career education subjects which are offered mostly in rural schools. The students who wish to



choose agriculture as an option may take 11-24 credits of basic agriculture. In the Upper Secondary School curriculum, established since 1981, agricultural subjects are designed to provide students, who wish to continue taking agriculture as an option, with better skills and experiences. Each student is required to take 57 credits of agriculture which is about 60 percent of all required subjects in the curriculum.

Students may choose to follow Plan A or Plan B of agricultural options. Plan A called in Thai as Waw Chaw 1 (W.C.1) is designed for students who wish to enter into the farming occupation, while Plan B or Waw Chaw 2 (W.C.2) is catered for those who intend to go into the labour force as middle level agricultural workers. It is important to note that the Waw Chaw 2 is equivalent to that of the Vocational Certificate (P.W.C.), and is closely related to vocational agriculture education programme offered by the Department of Vocational Education (Sanguansri, 1987).

In the vocational stream, agricultural education at the secondary and post secondary level is under the Ministry of Education. Most of vocational agriculture programmes are administered by Department of Vocational Education. At this level, 43 agricultural colleges offer a three-year curriculum leading to a higher vocational certificate in agriculture (P.W.C.). The main objectives of the programme are as follows: