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**CURRICULUM INFERENCES FOR SECONDARY SCHOOL TEACHERS IN
POPULATION EDUCATION WITHIN THE SCHOOL SYSTEM OF
THAILAND**

East Tennessee State University

Ed.D. 1981

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**CURRICULUM INFERENCES FOR SECONDARY SCHOOL TEACHERS IN POPULATION
EDUCATION WITHIN THE SCHOOL SYSTEM OF THAILAND**

**A Dissertation
Presented to
the Faculty of the Department of Supervision and Administration
East Tennessee State University**

**In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education**

**by
Manit Subhakul
December 1981**

APPROVAL

This is to certify that the Graduate Committee of

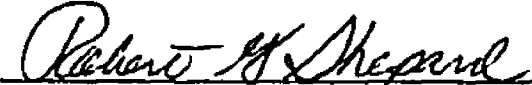
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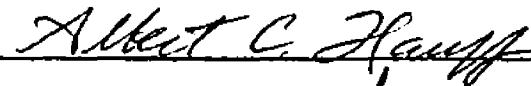
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The committee read and examined his dissertation, supervised his defense of it in an oral examination, and decided to recommend that his study be submitted to the Graduate Council and the Dean of the School of Graduate Studies in partial fulfillment of the requirements for the degree Doctor of Education.


Chairman, Graduate Committee









Signed on behalf of
the Graduate Council


Dean, School of Graduate Studies

Abstract

CURRICULUM INFERENCES FOR SECONDARY SCHOOL TEACHERS IN POPULATION
EDUCATION WITHIN THE SCHOOL SYSTEM OF THAILAND

By

Manit Subhakul

A rapidly increasing population in Thailand became the major barrier to socio-economic development of the country. In response to the high rate of population growth, The Royal Thai Cabinet announced a national population policy on March 17, 1970. After this announcement, an extensive family planning program was developed and implemented throughout the country. The goal was to reduce the population growth rate among those already in the reproductive age group. However, population control could not depend entirely on family planning programs because family planning attempted to control only unwanted births. A premise of this study was that before there could be any hope of controlling fertility, there must be a change in attitude of the youth of Thailand away from the norm of having large families. Population education must be concerned with changing opinions and values, so that small families will be desired and appreciated. It was suggested that long term fertility control should be provided simultaneously with family planning. Although population education could not alter current family size, the major factor affecting the total population of the country, population education should be able to help individuals do something in the immediate future to improve the quality of their lives by conserving natural resources and protecting the environment.

During the 1970's educational leaders in Thailand worked towards a plan to adopt population education at all levels in the educational system. At the time of this study, population education had been integrated into almost every level within the school system. Providing courses in population education at all school levels had increased the need for population teachers and instructional materials.

The purposes of this study were: (1) to draw inferences about the suitability of contemporary population teacher education programs in Thailand for providing qualified teachers for secondary schools; (2) to provide basic information helpful in establishing programs in keeping with the educational needs of Thai secondary school teachers who would participate in population education. Specifically, the findings of this study should be useful in assisting those concerned

with curriculum development in teacher training colleges and those engaged in teaching prospective teachers to determine more accurately the nature, scope, and organization of population education. (3) Finally, the population education curriculum guide would be developed as a curriculum resource for Thai secondary school teachers who would be teaching the course.

The study was an application of the exploratory type of descriptive methodology using library resources and the survey technique. Historical research contributed certain criteria concerned with developing educational programs. The purpose was to bring together accurate information concerning the nature and status of population education and to apply the data to developing curriculum guidelines and source materials for teacher preparation for leadership roles.

A set of questions was developed, and specialists in the field of population education and family planning were asked to respond. Inferences for a population education program were drawn, based on the data received from the survey of specialists.

There was considerable agreement among panelists about the structure, objectives and content of the population education curriculum. There was little disagreement with regard to prerequisites for teachers entering the program, but alternative views were expressed by some panelists. The concentration of panelists' views was on what the program ought to be in relation to future roles of prospective population education teachers, and on community development policies of the nation.

The findings indicated that there were three tasks in developing a training program for population education teachers. These tasks focused on the curriculum areas needed in the population education program in Thailand at the time of the study. The activities that needed to be accomplished consisted of setting purposes and defining objectives, selecting and organizing learning experiences, and the internship.

Based on the findings, the curriculum guide for secondary school population education teachers in the school system of Thailand was developed.

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The writer dedicates this dissertation to his parents, Manas and Sa-ard Subhakul; to his sisters, Prapa Matangkul and Sa-ardluksana Subhakul; to his wife Marina and his two daughters, Malinda and Alisa Subhakul, who made tremendous sacrifices which enabled him to pursue his educational goals.

ACKNOWLEDGMENTS

The writer wishes to express his sincere appreciation to everyone who helped to make this study possible: to Dr. William L. Evernden, Committee Chairman and Director of the Dissertation, for his encouragement, guidance, assistance, and complete devotion throughout the study; and to the committee members, Dr. Albert C. Hauff, Dr. Monroe T. Morgan, Dr. Thomas G. Ronald and Dr. Robert G. Shepard.

I wish to express my gratitude to the panelists from whom I received valuable data, advice, and suggestions; to my friend, Dr. Chaiwat Panjapongse for his constant assistance; to Dr. Elizabeth McMahan for her encouragement and her personal introductions to authorities in the field; to Dr. C. Harold Measel for his initial assistance; to Madaline Jenkins, typist; to Kathryn Ronald for her editorial assistance; and to my very best friends, Reid and Melba Bailey for their help and encouragement throughout my studies.

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Chapter 1

INTRODUCTION

Research studies done during the years of the 1970's and 1980's showed the most important problem of Thai society to be rapid population growth. The population growth rate of Thailand was relatively high, approximately 2.3 percent in 1979.¹ The rapidly increasing population caused many socio-economic problems in Thai society, especially in the field of education, because of the great desire and need for expanded education. It was believed that this population problem had become a major obstacle to the economic development of the country. The Thai government had recognized the problem of job placement, as well as education.

In response to the high rate of population growth, the Royal Thai Cabinet announced a national population policy on March 17, 1970. After this announcement, an extensive family planning program was developed and implemented throughout the country. The goal was to reduce the population growth rate among those already in the reproductive age group as soon as possible. However, population control could not depend entirely on family planning programs because family planning attempted to control only unwanted births. A premise of this study was that before there can be any hope of controlling fertility, there must be a change in the

¹Population Reference Bureau, 1979 World Population Data Sheet (Washington, D. C.: Population Reference Bureau, 1979).

attitude of the youth of Thailand towards the norm of having large families. Population education must be concerned with changing opinions and values so that small families will be desired and appreciated. It was suggested that long term fertility control should be provided simultaneously with family planning.

There was a growing demand to provide population education for all youth, both those in school and out of school, because both groups of young people will affect the demographic situation of Thailand in the future. Belief in the need for population education appeared to be strong among school administrators and educators of Thailand. The studies of Prapapen Suwan² and Chaiwat Panjaphongse³ indicated that school administrators, primary and secondary teachers, teachers in training and instructors in teacher preparation institutions in Thailand had strong positive attitudes towards adopting population education at all levels in the school system of Thailand. They not only agreed with the idea of introducing population education to youth, both in and out of school, but also favored adult education in family planning.

At the time for this study there were not yet enough curriculum materials for population education in teacher preparation institutions.

²Prapapen Suwan, "A Study of Thai Primary School Teachers and Educational Administrators' Attitudes Towards Population Education in Thailand" (unpublished doctoral dissertation, University of North Carolina, 1973), pp. 208-27.

³Chaiwat Panjaphongse, "Knowledge, Attitudes, and Beliefs About Population Education of Teachers in Thailand: A Comparison of Secondary Institutions" (unpublished doctoral dissertation, University of North Carolina, 1974), pp. 196-225.

The need for preparing population education teachers and developing curriculum materials for the teachers who would participate in population education programs in the secondary school was urgent.

Since the educator in Thailand showed a favorable attitude towards population education and family planning, the investigator considered this an appropriate time to provide Thai educators a body of concepts and data pertaining to Thailand which will be useful as a basis for selected aspects of a curriculum in population education for the students in colleges and those who will be working as the population teachers. It is believed that those concerned with curriculum development need to look closely at the path leading to the goal of the curriculum, in order to move toward the right direction but not unwanted destinations. Only then, can a good program in population education be implemented in the educational systems of Thailand.

The Problem

Statement of the Problem

The problem was to determine the kind of educational preparation and curriculum materials would provide secondary school teachers with adequate knowledge to direct programs needed to meet anticipated demands for extending population education throughout the school system of Thailand.

Sub-Problems

The following sub-problems were closely related to the major problem of the study.

1. To determine the objectives of population education programs for the secondary school teacher who would participate in teaching population education in the Thai school system;
2. To determine the educational prerequisites and/or experiences that were recommended;
3. To determine the expected roles for graduates within the schools and community;
4. To determine the specific courses, experiences, and competencies that should be included in the curriculum and how these should be organized;
5. To determine how the effectiveness of the teacher graduated from the programs should be evaluated;
6. To determine recommendations that should be made for curriculum change in the future;
7. To determine what curriculum materials would help Thai teachers to provide the students the awareness and understanding of population problems in a social cultural context which might lead to a new basis of decision making for individuals and their families; and a better understanding of the social and economic changes that would ensure a just and adequate quality of life for Thai peoples;
8. To determine how the curriculum guide may develop as a result of the first seven sub-problems being partially validated in order to ensure the accuracy of the findings and the validity of its contents.

Purpose of the Study

It was the purpose of this study: (1) to draw inferences about the suitability of present population teacher education programs in Thailand for providing qualified teachers for secondary school

population education programs; (2) to provide basic information helpful in establishing programs in keeping with the educational needs of Thai secondary school teachers who would participate in population education in Thailand. Specifically the findings of this study should be useful in assisting those concerned with curriculum development in teacher training colleges and those engaged in teaching prospective teachers to determine more accurately the nature, scope, and organization of population education. (3) Finally, the population education curriculum guide would be developed as a curriculum resource for Thai secondary school teachers who would be teaching this course.

Significance of the Study

There was a growing demand to provide population education for all youth, both those in school and out of school, since these two groups of young people would affect the demographic situation of Thailand in the future. The adoption of population education programs as a part of general education at all school levels in Thailand would lead to an increasing demand for teachers, specialists and educational media in this area. The existing problem considered as the major obstacle to the adoption and expansion of a population education program in Thailand was the insufficiency of text materials and resource books. This study was done to make available to Thai teachers and educators a formulation of the knowledge basis for senior high school curricula in population education. This curriculum guide could provide Thai teachers a body of concepts pertaining to population in Thailand which will be useful in population education in senior high school and lower and higher level teacher preparation.

Limitations of the Study

This study was limited to a consideration of the educational needs of:

1. The teachers and educators who would have the responsibility for teaching population education in senior secondary schools in Thailand;
2. The students in lower and higher levels of teacher training colleges and the students in senior secondary schools;
3. The limited statistical information used in the study was the latest available and was used primarily to illustrate and support concepts in population education;
4. Contemporary primary source material was used whenever available. Questionnaires, personal correspondence and interview techniques were used for gathering information from eight individual authorities in Thailand and in United Nations agencies in the United States and abroad. When such sources were unavailable or incomplete, secondary source materials from the Thai government, private organizations and World Bank, UNESCO, and UNICEF were used to supplement the primary sources used.

Theoretical Framework

Assumptions

The following assumptions were considered important to this study:

1. There was an urgent need for population and environmental control in Thailand. The provision of an extensive family planning

program and the simultaneous promotion of population education throughout the country were acceptable approaches to population control in Thailand.

2. Population education teachers would be needed to provide leadership for initiating and expanding population education for all students in school and for adults or youths who were out of school.

3. There were not sufficient numbers of professionally prepared teachers to implement population education programs throughout the country.

4. The knowledge and experience obtained from participating in the population education programs suggested from the findings of this study would make it possible for graduates to function effectively as resource persons in population education programs throughout the country.

5. Individual teachers who possessed population knowledge would be able to introduce such knowledge into other courses where the schools were not yet ready to adopt specific courses in population education.

6. The provision of a curriculum guide would help Thai teachers to conduct secondary school population education programs more effectively.

Definitions of Terms

Curriculum Guidelines

The term curriculum guideline refers to the educational plan developed to assist those concerned with curriculum development and

those engaged in population education at the secondary school level to find the most appropriate offerings and combination of subjects to fulfill the needs and expectations of students.

Panel of Experts

Within the context of this study, a panel of experts refers to those individuals experienced in population education in Thailand who were asked to respond to questions on an interview guide.

Population Education

Population education encompasses those processes necessary to provide an individual with opportunities to acquire knowledge of human population and the effect of population changes upon the individual's life and the environment; knowledge which will help the individual to develop attitudes, behaviors of positive value, and abilities to react appropriately.

Population Education Teacher

A population education teacher is an individual who may be directly responsible for teaching and directing population education within the school system of Thailand.

School System

A school system refers to the stream of education from kindergarten through upper secondary level (Grades 11-12), which includes vocational and adult educational schools.

Procedures of the Study

Eight sub-problems, listed earlier in this chapter, needed to be resolved to accomplish the task of drawing inferences and developing a curriculum guide for the use of secondary school teachers in population education. Procedures were designed to facilitate the collection of information for use in providing a solution to these sub-problems.

The first step in this investigation was to complete a preliminary survey of pertinent literature and research. Following this initial library research, selected literature was analyzed and evaluated for possible contributions to the study.

The next step was to prepare an instrument to submit to experts in the field of population education to secure their opinions of what should be included in educational preparation and curriculum materials for secondary school teachers in population education. Responses from the panel of experts were then analyzed and reported under the heading of the first six sub-problems. Inferences drawn from the findings of the first six sub-problems suggested the appropriate program for preparation of secondary school teachers to teach in population education.

Information provided by the panel of experts was used as a basis for developing curriculum guidelines and materials for Thai teachers in secondary population education (subproblem 7).

Partial validation of the curriculum guide was accomplished through an evaluation critique provided by the same panel of experts (sub-problem 8). These procedures are described in detail in Chapter 3.

Organization of the Study

Chapter 1 includes an introduction to the study, statement of the problem and sub-problems, the purpose of the study, importance of the study, definitions of terms, limitations imposed on the study, assumptions, explanation of procedures, and an outline of the organization of the study.

Chapter 2 contains a review of literature related to the study.

In Chapter 3, the methodology used by the investigator is described and explained.

Analysis and interpretation of the data, including information relevant to the first six sub-problems, are presented in Chapter 4.

In Chapter 5, information obtained through responses of the selected experts to questionnaires and interviews is presented, analyzed and interpreted. Inferences for the educational program for the preparation of population education teachers are presented.

Partial validation of the curriculum guide through an evaluation critique obtained from the same group of experts is also analyzed and reported in Chapter 5.

Chapter 6 consists of the summary, conclusions, and recommendations.

The introduction to a population education curriculum guide and source materials are included in the appendices.

Chapter 2

REVIEW OF LITERATURE

Introduction

Thailand's population problem could not be understood without some knowledge of the geography, demography and culture of the country. No attempt was made to present the history of Thailand. The review of literature is divided into these major sections: the general characteristics of Thailand, the historical development of population education in the country, and curriculum development theory related to the analysis and interpretation of the data.

General Characteristics of Thailand

Location and Description

Thailand was an independent kingdom located in tropical Southeast Asia. It was a predominately agricultural nation of approximately 200,128 square miles. The country was bounded on the north and west by Burma, on the north and east by Laos, on the southeast by Cambodia, and it extended south to Malasia. The Bay of Bengal on the west, the Gulf of Thailand on the east and the Indian Ocean made Thailand a peninsula, called by the Thai people the "Golden Peninsula."

Thailand was divided geographically into four main regions: the mountainous north, the central plain, the northeastern plateau and the eastern regions, and the southern peninsula.

The people of Thailand were called Thai. Before 1939 they were known politically as the Siamese and their country as Siam. The Thai language as spoken in Central Thailand was used as an official language. There were three dialects: that of the north, that of the northeast, and that of the south. Buddhism was the national religion. The majority of the Thai people, approximately 94.0 percent, professed Buddhism, 4.0 percent professed Islam and less than 1.0 percent were Christian.

Farming was the dominant economic activity of the population, and the economy of Thailand was distinctly a "rice economy." Fishing ranked second only to agriculture in the nation's economy, and fish, both fresh and salt-water, and other seafoods were considered as the most important nutritional resources of Thai people. Since the predominant occupations of Thai people, agriculture and fishing were not automated, human labor was in great demand and large families were important to the labor supply. The overall social structure and values of the culture also favored large families. For example, large families offered security to the parents in their old age. The rural family averaged about six persons per household.

Population of Thailand

It was believed that the 1960 census of Thailand was more accurate than any previous census and could be used for analysis of demographic problems. Although the last census of Thailand was conducted in 1980, there were not yet detailed data available at the time of writing; only estimates of vital statistics were available.

Most of the developing countries were facing the pattern of over-population rather than depopulation. Thailand was among these countries. The tremendous growth in Thailand's population extended over more than a century. It was not until 1911 that the first Thai census was taken. The total population counted in 1911 was about 8.3 million. A nationwide census from the beginning until 1980 has been taken eight times: in 1911, 1919, 1929, 1937, 1947, 1960, 1970, and 1980.¹ From 1911 to 1976 the population increased from 8.3 million to 43.3 million; five times in sixty-five years. In 1976 the population in Thailand was estimated as 43.3 million, with an annual increase rate of 2.5 percent a year.² Although the annual increase rate had declined since 1970, from 3.3 percent a year to 2.3 percent a year, in 1979 the estimated population of 46.2 million ranked Thailand the fifteenth most populous country in the world.³

Once again the 1960 census and the research studies done during 1960 and 1977 were consistent with regard to age data. They indicated that approximately 40 to 45 percent of the population of Thailand were below the age of fifteen, 50 percent between fifteen and fifty-nine, and about 5 percent over fifty-nine.⁴ Since Thailand contained a large

¹Prapapen Suwan, "A Study of Thai Primary School Teachers and Educational Administrators' Attitudes Towards Population Education in Thailand" (unpublished doctoral dissertation, University of North Carolina, 1973), p. 24.

²Population Reference Bureau, 1979 World Population Data Sheet (Washington, D. C.: Population Reference Bureau, 1979).

³Population Reference Bureau, 1977 World Population Data Sheet (Washington, D. C.: Population Reference Bureau, 1978).

⁴Ibid.

proportion of young persons, it might be considered as a nation of young people.

The latest census was taken in 1980 and as reported on December 31, 1980, indicated that the population of Thailand was 46,961,338 people; 23,627,727 males and 23,233,611 females. Compared to the population in 1979, the Thai population increased 847,582 people or 1.82 percent. Bangkok had the most population; approximately 5,153,902 people. The second largest was Nakorn Rajshima, 1, 916,631 people.⁵

Educational System

According to the constitution of the country, the education of Thai citizens was the direct responsibility of the Thai government. All educational institutes must be under governmental control and regulations. As an indicator of the extremely high priority government attached to education, the National Education Council was established within the Prime Minister's Office, in 1975. This new organization was made responsible for a national scheme for education. At the time this study was done, the Thai educational system followed the National Scheme for Education 1960.

The National Scheme for Education 1960 was categorized into five major sections as follows:

1. Educational Objectives
2. Educational Levels

⁵Thai News (Office of the Information Attache, The Royal Thai Embassy, Washington, D. C.), Friday, March 27, 1981, p. 8.

3. School Systems
4. Compulsory Education
5. Educational plans for the future

Educational Objectives

The pressure for rapid economic and social development became very strong in Thai society. The Thai government realized that the educational system must be appropriately expanded and modernized to meet the needs of individuals to deal with new situations. The National Scheme for Education 1960 was prepared to cope with the way of living in the changing society of Thai people. The basic objectives of the National Scheme for Education were outlined as follows:

1. The Thai people shall be educated according to their individual capacities, so that they should be moral and cultural citizens with discipline and responsibility, with good mental and physical health, and with a democratic outlook. They should be given the knowledge and skills necessary for carrying out an occupation useful both for themselves and for their nation.
2. Boys and girls should receive full time education up to the age of fifteen.
3. Boys and girls should strive to gain knowledge and experience that will serve a useful purpose in their lives.
4. Education must also serve the needs of individuals as well as those of society. It must also be in harmony with the economic and political systems of the country.
5. Four basic types of education should be given to all boys and girls:
 - a. Moral education;
 - b. Physical education;
 - c. Intellectual education;
 - d. Practical education.
6. The state should educate the population of the country to as great an extent as its economic system will allow.⁶

⁶Education in Thailand (Bangkok: Ministry of Education, 1971), p. 7.

Educational Levels

The National Scheme for Education 1960 categorized the Thai Education system into four levels as follows:

1. Kindergarten. Kindergarten was an education which provided opportunities for young children to get acquainted with the school. The children in the kindergarten were provided with basic knowledge for primary school.

2. Primary education. The primary educational level was aimed at the development of basic knowledge, skills and good attitudes of the children. The government considered education at this level was the most crucial part of the whole educational system because the majority of the Thai population must attend school for the first four years. Primary education is compulsory and divided into two levels: (1) lower primary education (Grades 1-4) and (2) upper primary education (Grades 5-7).

3. Secondary education. Secondary education is based on the primary education knowledge. The purposes of education at this level were: (1) to explore and to support the talents and interests of the youngsters; and (2) to give youngsters general knowledge background useful for their likely future employment and higher education.

Secondary education was divided into (1) lower secondary level and (2) higher secondary level. Each level had a maximum period of three years.

4. Higher education. Higher education was an education after secondary education. It included advanced vocational education, and education at college and university levels. Higher education aimed at

improving manpower in specialist and professional fields. The period of enrollment in the higher educational level varied from three to four and/or six years depending on the area of the major studies.

The education of Thai people was a government responsibility, and the Thai government was required to support and promote the education of Thai people as much as possible. The responsibility for the administration of education in Thailand was shared by three government ministers: the office of the Prime Minister, the Minister of Education and the Minister of Interior. Each of these three government organizations was responsible for education at different levels. The office of the Prime Minister was responsible for higher education, and overall financial and staffing aspects of the whole educational system. The Ministry of Education was responsible for the general education concentrated at the secondary level, and pedagogic aspects of the whole system. Elementary education was the responsibility of the Ministry of Interior. There might be some overlapping of authority in educational administration among these three organizations.

The School System

After the National Scheme for Education 1960 came into force, there was a major revision in the Thai school system. The new structure of the school system provided more opportunities to individuals to acquire the wealth of information and knowledge which they need for their future.

This new system began to operate on April 1, 1961. The structure of the new school system could be described as follows:

Kindergarten School. The kindergarten school provided an opportunity for young children to be acquainted with the school system. Suggested ages for attending school were three to six years old. The school was arranged into two or three classes. In some instances the primary school might arrange a class for young children to prepare them for primary education. There were some public kindergarten schools operated for the demonstration.

Primary School. There were two levels of primary school: (1) lower primary level (grades 1 through 4) and (2) upper primary level (grades 5 through 7).

1. Lower Primary School. Education at this level was compulsory. The government took full responsibility for primary school education. Most of the primary schools were operated by government and local authorities. There were many primary schools run by such government agencies as the Ministry of education, the municipalities, and some teacher training colleges which established primary schools as demonstration schools.

2. Upper Primary School. The education at upper primary school level was designed for the extension of compulsory education. It was organized as a continuation of lower primary education. The government intended to maintain compulsory education at the lower primary level and then extended to the upper primary level throughout the country as soon as possible.

Both lower and upper primary levels might be offered in the same school or separately.

3. Secondary School. The education in secondary school aimed at (1) the development of an individual's academic ability for his future studies at the higher education level, and (2) the development of individuals' occupational ability according to their skills and interests. The government took full responsibility for secondary school education. The public as well as private schools were accredited.

The secondary school system was divided into two streams:

1. Academic Stream. The secondary school in the academic stream was divided into two levels: (a) lower level (grades 8-9-10), and (b) higher level (grades 11-12). The academic secondary schools concentrated very much on academic subjects, especially in the higher level which prepared students for higher education.

2. Vocational Stream. Secondary vocational education provided opportunities for individuals who preferred to develop their occupational skills and knowledge after finishing their primary education.

The education in vocational secondary school was divided into two levels: (1) lower secondary, and (2) higher secondary level. Each level was arranged into one, two, and/or three classes depending on the nature of the subject matter in each occupational area.

The higher secondary level in the vocational stream provided an opportunity for individuals who completed lower secondary level in the academic stream and then transferred to the vocational stream. The graduates from secondary school at higher level, both academic and vocational, were eligible to continue their education in the universities and/or the advanced technical institutes.

Compulsory Education

Compulsory education had been enforced in the Thai school system since 1921. Under the Primary School Act of 1921, parents were required to send their children, on reaching their eighth year of age, to a primary school until they reached their fifteenth year and/or finished at least grade four. The extension of compulsory education up to grade seven was being implemented. According to the National Scheme for Education 1960, the government planned to provide public education at compulsory levels throughout the country. Compulsory education was being extended gradually according to the economic status of the government in order to raise the standard of the basic education of Thai people.

Teacher Training

The Thai government was aware of the importance of the teacher to the success of educational development within the country. Thus, the expansion and improvement of teacher education were considered as the first priorities by the Ministry of Education.

There were several teacher training institutes in Thailand, such as the Department of Vocational Education, the Department of Physical Education, the Department of Fine Arts and faculties of education at seven universities. The Teacher Training Department of the Ministry of Education, and the College of Education produced teachers for the Thai educational system. Among these institutes, the Teacher Training Department and the College of Education Ministry of Education were considered as the major sources of teacher production of the country.

The following were six basic types of preservice training carried out by the Teacher Training Department of the Ministry of Education:

- a) A two year program after Grade 10 or a one year program after Grade 12 leading to a Lower Certificate;
- b) A two year program after the Lower Certificate leading to a Higher Certificate;
- c) A four year program either after the Lower Certificate or after Grade 12 leading to a Bachelor of Education degree;
- d) A Two year program after the Higher Certificate leading to a Bachelor of Education Degree;
- e) A two year program after B. Ed. leading to a Master of Education degree; and
- f) A one year program after B. Ed. leading to a Higher Certificate for Specialized Teaching.

At the higher levels students not only chose particular fields of study to major in, but also chose between four different courses directed towards elementary, vocational, secondary education, and educational administration respectively.⁷

Among these six basic types of teacher training programs, the lower and the higher certificate levels had larger enrollment numbers than the other programs. The explanation was that the need for teachers at these two levels was high. The government provided the training in the teacher training colleges throughout the country.

The expansion of all types of teacher training was rapidly done by the government. In 1971 there were twenty-five teacher training colleges, and seven branches of the college of education which were operated by the government. There was not yet any private teacher training college at the time of this study.

It was intended that the Teacher Training Department, Ministry of Education train teachers at the certificate level, especially at the lower certificate level, for working mainly in rural primary schools.

⁷Education in Thailand, p. 45.

The curriculum for teacher training at these two levels focused on the development of the skills of the teacher for both classroom teaching and community development work. At the lower certificate level the training not only provided the students teaching and working skills, but also provided a general education equivalent to that provided in Grades 11 and 12 in secondary academic schools. Therefore, almost 60 percent of the curriculum at this level was shared with general education. At the higher certificate level the curriculum was made available for the students to select their majors, minors and/or elective subjects.

The personnel of the Department of Teacher Training realized that the effectiveness of teachers graduated with lower certificates was insufficient and all teacher training programs should be upgraded to at least the higher certificate level.

The Historical Development of Population Education of Thailand

Thailand's rapid growth rate has been recognized by the government since 1958, when a World Bank Economic Mission pointed out that the high rate of population growth was adversely affecting Thailand's development efforts.⁸ As a consequence of research done by the National Economic Development Board, the government decided in 1961 that birth control was an individual concern and that the distribution of birth control devices must not be publicized.

⁸ National Family Planning Program, Ministry of Public Health, Family Planning in Thailand 1965-1971 (1972 ed.,; Bangkok, Thailand: Nai Chalong Kritakom Printer, 1972), p. 3.

In 1963 the government began a serious effort to study methods of population control, and soon after that the first National Population Seminar was held. A family planning project was established by the National Research Council and the Ministry of Public Health under the name of "The Family Health Research Project."⁹ A field survey was conducted in 1964, and a pilot project, the Potharam Family Planning Project, was established. Family action research in the Potharam district gave strong encouragement for similar action research to be carried out in other parts of the country.¹⁰

During the years 1964 through 1966, a survey of population change was done by the National Statistical Office and the United States Agency for International Development. In 1955, the First Bangkok Family Planning Clinic was opened at Thai Red Cross, Chulalongkorn Hospital. In the year of 1966 the Second National Population Seminar was held by the National Research Council, and the present International Postpartum Program, Family Clinic Activities, Institute of Population Studies, and Institute for Population and Social Research were created. Chulalongkorn Hospital, with the cooperation of the International Planned Parenthood Federation, adopted the Mobile Family Planning Clinic in 1967, to help in the extension of family planning services in suburban and rural areas.¹¹ During the years 1968 to 1970, the Ministry

⁹Radom Setteeton, "The Problem of Population Growth in Thailand: With Emphasis on Food Production and Family Planning" (Unpublished doctoral dissertation, Michigan State University, 1967), p. 135.

¹⁰Setteeton, p. 188.

¹¹National Family Planning Program in Thailand, 1965-1971, pp. 3-4.

of Public Health, with the cooperation of USAID, POPULATION COUNCIL, and UNICEF, quietly carried out family planning activities within the Family Health Research Project. The primary objectives of this project were to train public health personnel in the field of population and family planning, and also provide family planning services, information, and motivation to the clients.¹² The Ministry of Public Health and the Population Council also provided an expanded postpartum program in 1969, which was still in operation in 1976. In the same year the National Research Council, Chiangmai University and the Population Council presented a seminar in population and family planning for the press, radio and television.

Early in 1970, Thai agencies and the Population Council worked cooperatively and actively to persuade the government to accept population and family planning as national policy. Finally on March 17, 1970, the Royal Thai Cabinet announced an official national population policy which called for the lowering of the excessively high rate of population growth through the voluntary practice of family planning. Following the announcement of this national population policy, a five-year plan (1972-1976) was developed with the basic objective of reducing the population growth rate from over 3.0 percent to 2.5 percent by the end of 1976 through the provision of family planning information and services throughout the country.¹³

¹²Ministry of Public Health, Public Health in Thailand (Bangkok: Ministry of Public Health, 1973), p. 45.

¹³Ministry of Public Health, pp. 49-51.

The activities following the declaration of population policy in the field of education did not become predominant until after 1970. The first active educational program with population components was the functional literacy and family life education project launched by the Adult Education Division, Ministry of Education in 1970. The flexibility of the curriculum of this out-of-school program and the less formalized administrative structure compared to those of the formal school system enabled this program to take the initial step ahead of the in-school program. The curriculum of this program was designed to meet the needs of the colleges in their communities. The concept-oriented curriculum was based on the problems of the rural population, with major emphasis on the formation of positive attitudes and eventually the adoption of effective practices among the rural population.¹⁴

In September, 1971, the Population Education Seminar was held, sponsored jointly by the National Economic and Social Development Board, Ministry of Public Health, Ministry of Education, and Population Council. This seminar could be considered a concrete movement for the initiation of a population education program in Thailand, because the participants in this seminar included planners, administrators and educators from all organizations concerned with population education. The goal of the seminar was to discuss population problems, to define

¹⁴John Middleton, "Population Education in the Asian Region: A Conference on Needs and Directions," Report of the International Conference on Population Education in Asian Region, 1974 (Tagtaytay City, Philippines: The Development Academy of the Philippines, 1974), p. 213.

population education and its scope, and to identify the means by which population education could be implemented in the educational system for both in-school and out-of-school programs.

The seminar provided much interesting information which was useful for the development of population education in the school system of Thailand. The term "Population Education" was defined by participants in this seminar as,

The study of the population and the effect of population changes upon the family life, the community, the country and the world; so it will help the individual to better understand population dynamics, to realize his responsibility, and to be able to react appropriately.¹⁵

In November, 1972, after a group of Thai educators came back from a Hawaiian five-week population workshop, an ad hoc committee on population education was appointed by the Ministry of Education. This committee consisted of: (1) the Deputy Under-Secretary of State for Education; (2) the group that attended the Hawaiian workshop; (3) one representative each from Mahidol University and the Institute of Population Studies at Chulalongkorn University; (4) one representative from the Family Planning Project of the Ministry of Public Health; and (5) selected educational administrators. The appointment of this committee could be considered an informal endorsement of population education in the Ministry of Education. The appointed committee later served as an interim coordinating body for population education activities and in the formulation of population education plans for the Ministry of Education.

¹⁵Middleton, p. 213.

The activities of the ad hoc committee included: (1) formation of the population education plan, (2) dissemination of information, (3) training activities, (4) curriculum development, (5) production of population educational materials, and (6) research in population education and related subjects.

The training activities were priority responsibilities of the Ministry of Education. The Ministry had taken leadership in training teachers in population, both for the in-school and out-of-school programs. The training was mainly through in-service programs which were organized by officials of the Ministry of Education and those instructors in the College of Education who were originally sent for training in Taiwan and the United States of America. There was not yet a specific curriculum for population education in the College of Education. The drafting of curricula for the in-school and out-of-school programs in population education was undertaken at that time. However, the integration of population contents into the regular curriculum was done as a pilot program.

At the teacher training level, there was no formal training for student teachers for teaching population education. During February to November 1973, the Department of Teacher Training, Ministry of Education, sponsored by the Population Council through the ad hoc committee, undertook an action research project on population education. The project was designed to develop model lessons for the teaching of population education at the lower secondary school level. The finding of this research was that the integration of population education in

the existing curriculum and the use of population education as a new subject were considered as suitable approaches.¹⁶

Within the Department of Teacher Training of the Ministry of Education, the training activities were organized as in-service and workshop activities. Although the College of Education integrated population education into various existing courses, the curriculum was not considered as formal training for teaching population education in the school system.

Outside the Ministry of Education, the government of Thailand had established a Population Research and Training Center at Chulalongkorn University in 1966. In 1970 the name was changed by royal decree to confer the higher status of Institute of Population Studies. This institute had three major responsibilities: training demographers, keeping demographic records, and disseminating information and advice to government agencies and the public. The Faculty of Education, Chulalongkorn University, offered an undergraduate minor in population education. This program was not yet considered as a training program for teaching population education; it merely exposed students to general population knowledge.

Early in 1972, Mahidol University Population Education Project (MPEP) was adopted and began to operate to achieve three long-term objectives: (1) to serve as a national center for teaching, research and staff training in population education, (2) to prepare qualified teachers at the university level of health education, adult education, science education, and counseling education, all of whom would acquire

¹⁶Middleton, p. 220.

a major component of population education, and (3) to undertake research projects on population education which included curriculum development, methodology, and evaluation of population education programs.¹⁷

It could be said that The Mahidol University Education Project was on the way toward being a national population center.

In support of an establishment of population education in Thailand, the Prime Minister's office assumed a leadership role in supporting major activities in population programs. Overall planning and evaluation of the development of population activities were undertaken by the National Economic and Social Development Board (NESDB). The NESDB, with cooperation from various government and voluntary organizations, arranged a population education seminar in September, 1972. The NESDB subsequently organized a meeting of planners, educators, teachers and specialists in demography, population education and health to investigate further the possibility of integrating population education into the educational system. This institution had conducted several research studies on population matters from 1971 to 1973.¹⁸

In order to implement the population education program in the overall school system of Thailand, the Bangkok metropolis, which was in charge of the metropolitan primary schools, established a definite population education plan. This plan consisted of organizing an orientation meeting for school principals and education supervisors in different bureaus, randomly selecting schools for experimental

¹⁷Middleton, p. 222.

¹⁸Middleton, p. 222.

teaching, preparing a teacher's manual and model lessons and teaching this material in classes. The experimental teaching stage was in operation.

The voluntary organizations which participated in the population education movement were; Planned Parenthood Association of Thailand, Home Economics Association of Thailand, Social Welfare Council, The National Council of Women of Thailand, Mental Health Association of Thailand, and the Thailand Rural Reconstruction movement. Each of these voluntary organizations had its own objectives in supporting population education according to the scope of its responsibility and its functions.

Efforts were being made to implement population education in the overall school system of Thailand through government and private organizations. The result was the announcement by the government of adoption of population education as a national policy in November 1975.

Sommai Wansorn, the editor of Journal of Population Education, Mahidol University, Bangkok, Thailand, described in his editorial, "The Future of Population Education," that there were several obstacles to the programs of population education in Thailand. These obstacles were listed as follows.

1. Population education in Thailand originated from the pressure of foreign and international organizations, not from the needs of the Thai community. Therefore, the policy, ideas and the philosophy of population education in Thailand could not truly represent the needs of the Thai community and/or the nation. This would make it difficult to transfer new values and concepts in population education to the people and therefore it is difficult to achieve the goals.

2. Lack of continuity in population education policy of the nation:

During the past eight years since the population education program had started in 1970, it did not receive real support

from the administration. Even after the population policy was declared in 1976, there was not much put in action to promote the program activities. The Fourth National Population Education seminar held in August 1978, showed that much had been done in population education but it did not receive much attention and support from the administration. From the seminar there was no evidence of the continuity of the population education policy. It seemed that those activities done during the past eight years were a mandate, and population education would be a fad that would finally fade away from the interest of the nation.

3. Insufficient internal funds for the population education program:

It could be said that the population education program of Thailand from the time of starting till this time was supported by funds from foreign and international organizations except for the salaries paid for the permanent government employees who were responsible for the operation of the program.

At this time population education had been integrated into the curriculum at every level of the education system of the nation. However, there was not enough preparation for such implementation; instructional materials, texts, even qualified teachers to conduct the program because there were not enough funds for total implementation.

In 1978 the Ministry of Education provided an intensive training program in population education to social science teachers in senior high schools in all educational divisions of the nation. It could not hold much hope for the success of this program for teachers and qualified teachers and good curriculum materials.

4. Lack of understanding of the Philosophy of population education:

Population education was a new area in education in Thailand. It consisted of several concepts derived from different areas of sciences which could be called interdisciplinary and/or multidisciplinary science. There were few people who understood its concepts and philosophy, which made it difficult to clearly define the course of the subject matter.

Viewing population education as a solution for population problems, there was no guarantee that the educational process would be able to solve all social problems. Therefore, it is necessary to determine its values and effective means for the application of population education in the Thai society.

5. The problem in the administration of Population Education:

Currently the administration of population education in Thailand was interorganizations consisting of the representatives from different organizations which had different philosophies and ideas in determination of the objectives and direction of population education. The weakness of this type

of administration was that it would cause discrimination against new organizations, because of the representatives to their original organization. This type of administration would make it difficult for population education to achieve its goals and effectives.

6. The problem in preparation of personnel and curriculum materials:

To provide population education at all levels of the educational system of Thailand at this time, with a lack of qualified teachers to be responsible for teaching and conducting the classes, it seems like use of the blind to lead the blind. The unqualified teacher and/or un-well-prepared teacher may not direct the students in the direction of population education objectives. However this situation still exists and has not yet been improved because of lack of budget. The curriculum materials including audio-visual and texts in population education are scarce.

There are so few textbooks that they could be counted for the entire nation. A knowledgeable person in population education would find errors in the few texts that are available.

Wansorn concluded that during the past eight years of population education in Thailand there was not much progress; it would take more years to overcome the obstacles. At least serious efforts should be devoted to working through these obstacles in order to achieve the population education goal of the nation. Otherwise the whole program would be a waste for the nation and would become an unnecessary burden on both teachers and students. Certainly there were many other things that were more interesting and more valuable to learn than population education.¹⁹

Thus, in summary, it could be concluded that Thailand was in the process of establishing a population education program. The major population education programs in Thailand at the time of this study

¹⁹Sommai Wansorn, "The Future of Population Education," Journal of Population Education, V (August, 1978), 3-8.

were aimed at building administrative mechanisms, conducting research and planning curricula.

In the area of teacher training, there was not yet a specific population curriculum for preparing teachers to take full responsibilities and leadership at the school level.

Population Education and Curriculum Theory

As previously mentioned, the population of Thailand was increasing and continued to expand at a geometric rate with implications for the provision of new facilities and the treatment of population problems in the school curriculum. Thai educators believed that if population education could help young people to understand the nature of population pressure and its consequence, it would enable them to examine and evaluate individual, family and community well-being responsibilities. Few areas of curriculum change had involved as much controversy as sex-related education in the school system of Thailand. Population education would afford the best medium of bridging the gap between the existing knowledge of human well-being and man's application of this knowledge in society.

Population education is an interdisciplinary science of economic and healthful living. It encompasses the field of elementary demography and ecology converted into a highly problem-oriented and value-oriented set of discussions with students about the individual family, social, political, economic and environmental significance of alterna-

tive patterns of human reproductive behavior.²⁰ The term "Population Education" as defined by specialists in the field, such as Philip Hauser, Noel-David Burleson, Stephen Vierderman, Ozzie G. Simmons and Avabai Wadid, dictated that population education be a combination of four major areas: (1) sex education, (2) family life education, (3) demographic education, and (4) environmental education.²¹

Mary T. Lane and Ralph E. Wileman stated that population education should be thought of in broad terms, combining ideas that were both new and old. They defined the term "population education" as the study of human population and how population affected, and was affected by, several aspects of life: physical, social, cultural, political, economic and ecological.²²

As used in this study, the term population education is defined as the processes necessary to provide an individual with opportunities to acquire knowledge of the individual life and environment; knowledge which will help the individual to develop attitudes and behaviors of positive value, and abilities to react appropriately.

The place of population education in the school curriculum in Thailand should be justified by the fact that the consequence of rapid population growth had involved every individual in Thai society. Each

²⁰"Population Education, A Challenge of the Seventies," Population Bulletin, XXVI, 3 (1970), 11.

²¹Prapapen Suwan, "A Study of Thai Primary School Teacher and Educational Administrator's Attitudes Towards Population Education in Thailand" (unpublished doctoral dissertation, University of North Carolina, 1973), pp. 36-39.

²²Mary T. Lane and Ralph E. Wileman, A Structure for Population Education (Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina, 1974), p. 5.

individual was confronted with health decisions, economic decisions, and family life decision. No other subject in the existing curriculum could make this claim. Such decisions required scientific knowledge and intellectual skills, critical thinking, problem solving, self discipline, self direction and social awareness which can best be developed within the educational framework.

In the procedure of this study, it was noted that the focus of the study lay on the use of expert judgment to determine the type of educational program which would fulfill the needs of student teachers in teacher training colleges to meet anticipated demand for implementation of a population education program in the school system of Thailand. The technique was to analyze the responses by the panel of experts within a framework provided by J. Galen Saylor and William M. Alexander.²³

In his 1970 publication, Basic Principles of Curriculum and Instruction, Ralph W. Tyler developed a rationale which begins with four fundamental questions to be answered in developing any curriculum and plan of instruction.

These are:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?

²³J. Galen Saylor and William M. Alexander, Planning Curriculum for Schools (New York: Holt, Rinehart and Winston, Inc., 1971), pp. 26-27.

4. How can we determine whether these purposes are being attained?²⁴

The curriculum model designed by Saylor and Alexander required planners to answer the above questions, but it also called for the deliberate use of essential data as the basis for planning, a systemization of objectives and plans within curriculum domains, and more specific provision for instructional plans.²⁵

In any discipline the educational program begins with identification of purposes which may be the legitimate concern of educators.

For this discussion, educational purposes and educational objectives are not synonymous. An educational purpose refers to a goal or an aim; that is, a general concept, and is not directly measurable because the goals are abstract and open-ended. Goals are largely qualitative rather than quantitative. Educational objectives, on the other hand, are finite plans to achieve specific tasks within a specific period of time with the use of certain resources, and can be measured in terms of completing the task by a specific date. Educational objectives also shared the characteristics of being finite and quantifiable.

The educational objectives of a program such as we are dealing with in this study are those criteria by which materials are selected, content is outlined, instructional procedures are developed and evaluation procedures are prepared. The objectives of the educational program are really means to accomplish the basic purposes of the

²⁴Ralph Tyler, Basic Principles of Curriculum and Instruction (Chicago: The University of Chicago Press, 1970), p. 3.

²⁵Saylor and Alexander, p. 10.

program.²⁶ The purpose of any educational program is to change individuals by adding to the knowledge they possess, helping them to perform skills which otherwise they would not perform, and developing certain understandings, insights, and appreciation.²⁷ Certainly there are many changes that can take place in individuals as a result of learning experiences; however, these experiences are found in the teaching and learning process provided by the program. Harold T. Johnson stated that:

Establishing a meaningful statement of philosophy and objectives is very difficult; cooperative thought, planning, and action on the part of the total staff over an extended period of time is [are] required. This statement must be set forth in a form that enables each member of the professional staff to relate the activity in which he is engaged to a particular facet of the philosophy and objectives. A statement that is so hazy and vague that no one on the staff knows what it means can hardly serve the purpose.²⁸

Normally, educational purposes would suggest the basic studies or forces in the society. The selection of the educational objectives should be made on the basis of the criterion of social value. The objective must aim at that achievement of each individual which is good for the society and for individuals themselves. To reach this achievement, the suggested educational objectives must agree with the basic beliefs of the people in the society. In developing an educational objective, it is necessary to be aware of basic beliefs

²⁶Tyler, p. 3.

²⁷Hilda Taba, Curriculum Development (New York: Harcourt, Brace and World, 1962), p. 194.

²⁸Harold T. Johnson, Foundations of Curriculum (Columbus, Ohio: Charles E. Merrill Publishing Company, 1968), p. 73.

of people regarding the cultural tradition and to have a concept of the educated man in society. Saylor and Alexander suggested that in preparing the general goal of the educational program, groups of closely related sets of desired outcomes should be organized first. Such grouping may center around the activities of human beings, for example, as they grow and develop personally, live together in a social group, work together in sustaining and improving the life of each individual and the group collectively, govern themselves, or rear their children.²⁹

The educational objectives based upon the values of man in the society together with the philosophy of the educational program would help the learner to know his ultimate responsibility and how to function effectively in his society. Saylor and Alexander tell us:

A major aspect of goal definition is the determination of subgoals. These are basic elements in curriculum planning, the statements of the outcomes desired that postulate the kinds of learning opportunities that should be provided students. Of course, the subgoals are consistent with the general goals of the school, but they are much more detailed and specific, spelling out the parameters and nature of a domain of the curriculum, and they must be formulated for each aspect of the educational program from nursery school through adult programs.³⁰

It is necessary for the curriculum developer to investigate and determine the current level of development of students, their needs and interests. The investigations would identify the conditions and problems of contemporary life which make demands on students and provide opportunities for them. This investigation included the determination

²⁹Saylor and Alexander, pp. 167-68.

³⁰Saylor and Alexander, p. 169.

of (1) the future activities that the individuals would perform, (2) the problems that the students might encounter; and (3) the opportunities that the students would have for service and self-realization. On that basis the educational purposes of the school would be defined.

In developing the curriculum, a decision eventually has to be made as to what would be included and what would be excluded in the curriculum content in order to help the student profit best from the experiences he would undergo and to attain the purposes of the educational program. To determine what educational experiences could be provided to attain the purposes and objectives of the program, Saylor and Alexander suggested that the group of learning experiences must be created and defined by a set of broad educational goals which must be viewed as contributing to the achievement of the central goal. These learning experiences must be identified, and ways and means must be provided for initiating and evaluating them.³¹

Spector felt that one of the pitfalls that educators constantly found themselves in was that the learner does not always profit from the experiences that he is undergoing because the experiences provided for him were not carefully selected and planned with specific objectives in mind. He stated that unless the evaluation had first been invoked to assure that the desired behaviors were implicit in the educational experiences, they were unlikely to be profitable.³²

³¹Saylor and Alexander, p. 196.

³²Gerald Spector, "Curriculum Inferences for Professional Education in Family Planning Administration" (unpublished doctoral dissertation, University of Pittsburgh, 1970), pp. 74.

From a curriculum development standpoint, the problem of selecting learning experiences was the problem of developing the concept of evaluation in the formulation of educational objectives, and establishing a series of priorities. These priorities would provide the mechanism through which learning experiences were considered for inclusion in the curriculum. Tyler supported Spector through his contending that the means to accomplish the basic educational purposes of the program are the criteria by which materials are selected, content outlined, instructional procedures developed and evaluation procedures prepared.³³ These aspects of the educational programs are the mechanism through which learning experiences would be provided in order to achieve the objectives of the program. It has been emphasized by many curriculum specialists that educational objectives served as a basis for selecting desirable learning experiences and a substantial basis for curricula evaluation. Without proper evaluation techniques, it is difficult to judge the adequacy of the learning experiences provided in the program. From this discussion, those writers in curriculum theory considered the concept of evaluation in defining the objective of educational programs and selecting learning experiences to attain the objectives.

Central to these specifications (continuity, sequence, and integration) was identification of those elements which were to be reiterated (continued), deepened (sequenced), and broadened (integrated). The contents and activities that were included in the

³³Tyler, p. 3.

instructional objectives were those prior mentioned elements. The element in its various forms, components, aspects, and prerequisites is that which was reviewed, ordered and cumulated.

John D. McNeil stressed that the heart of the organizational problem was to understand clearly and to see through the instructional objective and to identify the steps necessary to its attainments.³⁴ These steps could best be ordered to yield effective learning.

Also to achieve the educational objectives, the learning experiences must be organized to be most appropriate for the domains and objectives. How can their educational experiences be effectively organized?

To determine how to organize the learning experiences, McNeil suggested that a good curriculum organization should meet the following specifications:

1. There must be planning for review and reiteration of that which had been learned (skill, concept, value), which was called meeting the criterion of continuity.
2. There must be planning for extension of learning experiences in depth, which was called the criterion of sequence.
3. The learning experiences must be kept alive and flexible which would provide a better chance for obtaining transfer and/or the ability to apply learning in new situations. This specification was called the criterion of integration.³⁵

³⁴John D. McNeil, Curriculum Administration (New York; The Macmillan Company, 1965), pp. 68-69.

³⁵McNeil, pp. 68-69.

The last important question to be considered and answered was: how can we determine whether these are being attained?

To achieve the educational purpose, which was the goal of the educational program, the achievement of educational objectives must be first attained. From the earlier decision the educational objective was defined on a finite plan for specific tasks, within a specific period of measurable time. The achievement of the objectives and the attainment of learning experiences were a measure of the teaching effectiveness and success.

McNiel stated that there were many factors in a curriculum plan which could influence changes in the learner. It was difficult to identify which factors or combinations of factors were relevant. He indicated that it might be that the kind of learning experience presented would create the influence, and the most important was the order in which the learning opportunities occurred. He continued that the major changes in the learner were not so much a product of curriculum plan as they were of those tangible factors which are the school climate, the teacher's personality, and the family situation. He stated that research on students indicated educational outcomes were much more closely related to the quality and type of the students enrolled than to the school's educational policies or practices.³⁶

Ray C. Phillips suggested that the determination of educational objectives should follow these three steps:

³⁶McNiel, p. 124.

1. to identify the objectives of education and translate these objectives into specific educational outcomes;
2. to select or to construct valid, reliable, and practical instruments and techniques for appraising specific phases of student behavior; and
3. to focus the evaluative data into an overall education of the individual, class, or learning situation.³⁷

It was evident in this discussion that the establishment of appropriate goals and objectives was basic to educational processes and necessary to effectiveness of teacher evaluation. It was a must for the teacher to understand and to succeed in interpreting the general objectives into classroom instructional objectives and learning experiences. Effective teaching was concerned with the overall development of all students. Attention must be focused on the effective development of skills, understanding, interest, attitudes, appreciations and values in all areas. Unless these mentioned criteria were met, the teacher would not make the maximum contribution to the growth and development of students.³⁸

In conclusion, to prepare population education teachers, the program must produce teachers who possess designated competencies for entry into the teaching profession. The program must be responsive to the students enrolled. The goals and objectives of the program must be identified. The academic background, physical, mental

³⁷Ray C. Phillips, Evaluation in Education (Columbus, Ohio: Charles E. Merrill Publishing Company, 1968), p. 2.

³⁸Phillips, p. 2.

condition and the attitude of the student before entering the program must be determined. The expectation of the outcome at the end of the program must be stated. The program must provide appropriate means to evaluate the effectiveness of the program to see if it operates efficiently as designed. It was necessary to determine if the process of the program was acceptable in the community and if there would be effects to and from the environment. Finally, the program must be flexible enough to adapt to any socio-economic forces on the programs.

Summary

The literature reviewed in this chapter focused on the following:

1. Population size of Thailand
2. Educational System
3. The historical development of population education of Thailand
4. Population education and curriculum theory

The foregoing review of literature indicated that a population education program for the overall school system of Thailand was beginning. There was not enough teachers, specialists and curriculum materials to implement the program to accomplish the national goals. A very limited amount of research had been done in the field of population education; especially in the area of curriculum development, more research was needed.

Chapter 3

METHODOLOGY

This study was an application of the exploratory type of descriptive methodology utilizing library resources and the survey technique. Selected methods of historical research also were utilized to make visible certain criteria concerned with developing educational programs. The purpose was to bring together accurate information concerning the nature and status of population education and to apply the data to developing curriculum guidelines and source materials for teacher preparation for leadership roles in population education in the school system of Thailand.

John W. Best¹ stated that in solving a problem or charting a course of action several sorts of information might be needed. These data could be gathered through the process of the descriptive method. The analysis might involve the opinions of experts who presumably knew how to reach the goal. Gerald Specter,² in 1970, applied this descriptive technique to his study. He developed curriculum guidelines for professional preparation of administrators of family planning programs. He made a thorough search of the literature in curriculum

¹John W. Best, Research in Education (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1959), p. 104.

²Gerald Specter, "Curriculum Inferences for Professional Education in Family Planning Administration" (unpublished doctoral dissertation, University of Pittsburgh, 1970), pp. 21-28.

and then developed a set of questions around major areas of the curriculum planning process. He used this set of questions as a guide to interview a group of experts in the population and family planning fields. Later the inferences for an educational program based upon the data received from the survey of experts' opinions were drawn. Specter mentioned, "Making use of expertise as discussed by Helmer and Rescher suggests much value in turning to the informed expert with his resources of background knowledge and the cultivated sense of relevance."³

Frederick Whitney supported the survey of expert judgment technique used in this study as:

. . . an organized attempt to analyze, interpret, and report the present status of a social institution, group, or area. It deals with a cross-section of the present, of duration sufficient for examination--that is, present time, not the present moment. Its purpose is to get groups of classified, generalized, and interpreted data for the guidance of practice in the immediate future.⁴

J. Galen Saylor and William M. Alexander⁵ mentioned that the use of expert judgement to determine what subjects to teach was a fairly common formula in curriculum planning for a subject curriculum. The survey of expert judgment for the purpose of this study used the personal interview and questionnaire technique. The questionnaire served as an informal discussion guide and was administered in one of

³Specter, p. 21.

⁴Frederick L. Whitney, The Elements of Research (New York: Prentice-Hall, Inc., 1949), p. 155.

⁵J. Galen Saylor and William M. Alexander, Planning Curriculum for Schools (New York: Holt, Rinehart and Winston, Inc., 1974), p. 8.

two ways. Experts available to the investigator were interviewed face-to-face; those impossible to reach personally, with mailed questionnaires. This technique enabled similar ground to be covered by each expert, even though the questions were designed to encourage open-ended responses. John L. Hayman, Jr.,⁶ stated that the use of open-ended questionnaires allowed the respondent to construct his answer if depth answers were desired, and also if the researcher was uncertain about what the response might be. No attempt was made to limit or restrict the responses by use of the discussion guide.

The questionnaire technique was considered necessary and practical for gathering data for this study because the investigator could not visit personally all of the experts from whom the information was desired.⁷ Since population education was a recent advancement in the field of education in Thailand, to prepare curriculum guidelines and source materials for teacher preparation, information and experiences of experts in other countries as well as in Thailand should be utilized.

The use of experts' opinion as cited by Specter⁸ not only provide valuable information but added validity and reliability to the study because such information was within the respondents' intellectual and experience domain. These informed experts were best able to carry out the application of theory necessary for reasoned

⁶John L. Hayman, Jr., Research in Education (Columbus, Ohio: Charles E. Merrill Publishing Company, 1968), p. 68.

⁷Carter V. Good and Douglas E. Scates, Methods of Research (New York: Appleton-Century-Crofts, Inc., 1954), pp. 606-07.

⁸Specter, p. 24.

predictions in their field. Their predictions would be most valuable and reliable because their directives about present actions are invariably conceived with a view to future results, especially in the area of policy formation and decision-making.

Making use of expert judgment in this study was by no means a new or untried practice. That judgment of groups of people forms a reliable and valid basis for determination of curriculum planning processes was shown by Specter,⁹ whose study was discussed earlier in this chapter. The methodology for this study was based on that of Specter.

Procedure of the Study

In this study the focus lay on the use of expert judgement to determine the type of educational program which would fulfill the needs of secondary school teachers to meet anticipated demand for implementation of a population education program in the school system of Thailand. The investigator considered that the prospective population teachers should receive needed appropriate preparation to help raise the standard of education and population knowledge among their people through practical application of their academic leadership in the communities. The procedures used to accomplish these purposes are described in detail in the following section.

⁹Specter, pp. 21-18.

Collection of Data

In addition to a review of related literature, the following procedures were utilized for the collection of data in this study:

1. Questionnaires were designed to use as a guide for face-to-face interviewing those experts who could be personally reached.

2. Those experts who could not be reached in the United States were contacted by mail and/or through the assistance of the investigator's representative to administer face-to-face interviews using the interview guides.

3. Draft copies of the curriculum guides developed in this study were sent to the same group of experts for evaluation. The returned evaluation critiques were then used as the data to strengthen the validity of the curriculum guide.

Nature of Questionnaires

To achieve the aims of this investigation the questionnaires were designed to serve as a guideline for discussion. Questions in the discussion guides were developed to obtain information concerning the main problem of the study. These questions were grouped around major areas related to curriculum needs at the time of this study and as projected for the future. Saylor and Alexander,¹⁰ curriculum specialists, agreed that the goal of career development and many programs for career education should be prominent in the following specialization domains:

¹⁰Saylor and Alexander, pp. 40-41.

1. personal development
2. human relations
3. continued learning skills
4. specialization

The questions grouped around these four domains provided the basic data sources and the kind of information needed for valid curricular planning for the purpose of this study. As stated by Saylor and Alexander, these four special domains represented a classification of major educational goals and related learning opportunities that encompassed their curriculum planning process.¹¹ The five major steps of the curriculum planning process that must be considered in Saylor and Alexander's model include;

1. Basic (External variables)
2. Goals, objectives and domains
3. Curriculum designing
4. Curriculum implementation (Instruction)
5. Curriculum evaluation¹²

Once again all items of the discussion guide covered the full range of topics relevant to the principal problem of this study, as well as information relative to the first six sub-problems. These questions were grouped around the following major areas of curriculum planning:

1. Investigation of the present status of population education in Thailand

¹¹Saylor and Alexander, pp. 40-41. ¹²Saylor and Alexander, p. 27.

2. Setting the fundamental objectives and goals of population programs for secondary school teachers
3. Determination of the most effective organization of curricular activities
4. Development of competencies and the expected roles for the secondary school teachers within the school and community
5. Decisions about evaluative procedures for determining teaching effectiveness of the program
6. Determination of the present status of the population education program in Thailand in terms of anticipated curricular change.

The responses within these major areas around which questions were grouped made it possible for the investigator to determine the methods of organizing content as a way of translating experts' ideas into the curriculum planning process. The nature of these questions also allowed each respondent to contribute any suggestion or comment to the study.

After the discussion guide was constructed, the members of the investigator's advisory committee reviewed it critically. The discussion guide was then tried in the field. The responses from the field resulted in few changes in the questions. These changes were designed to make the questions the most suitable for the purpose of this study.

Selection of Experts

The respondents for this study were experts in the field of population education. Assistance in identifying the most likely sources of data was sought from the following persons:

1. Elizabeth McMahan, Interim Dean of the Faculty
East Tennessee State University
2. Chaiwat Panjaphonse, Former Director of Population Education
Center, Mahidol University
Bangkok, Thailand

These persons were closely associated with experts in the field and could assist with gaining access to those not personally known to the investigator. One of these sources of data was personally contacted. The other, in Thailand, was contacted by mail requesting his cooperation in administering face-to-face interviews.

The panel of experts was carefully selected on the basis of criteria modified from those described by Letitia Fogoros.¹³ These criteria were as follows:

1. Well trained in the field of population education
2. Experienced and associated with the field long enough to be considered an expert by persons other than the investigator
3. Actively engaged as a teacher, director, research worker, or writer in the field of population education or a related field
4. Exercised considerable influence in the field and demonstrated by writing, public reputation, and having held responsible offices in one or more of the various national associations dealing with population education, family life education and family planning

¹³L. Marguerite Fogoros, "Determination of Elements Desirable for Courses in Family Life Education for the Senior Year High School" (unpublished doctoral dissertation, University of Michigan, 1961), p. 62.

5. International experts were those who met the previously listed criteria. Those who were actually participating or who formally participated in population education in Thailand were most acceptable.

According to the above criteria, the number of specialists available for this study was limited to fourteen.

Once the information was collected through the procedures described, it was summarized, analyzed and evaluated. The findings were then presented in narrative form around six major categories. Finally, based on the information gathered from the experts, the inferences for educational preparation of secondary school teachers in population education would be drawn. Curricular guides in population education for the use of the teachers would be synthesized and presented in a form appropriate for use in the population education program in Thailand. The information analysis procedure is presented in Chapter 4.

Inferences drawn from the analysis of returns from the panel of fourteen experts are reported in Chapter 5, and the curriculum guide for use of the teachers is in the appendices to the study. Partial validation of the curriculum guide through its resubmission to the same panel of experts is also reported in Chapter 5.

Chapter 4

ANALYSIS AND INTERPRETATION OF DATA

Composition of the Panel

The purpose of this chapter was to present an analysis of information obtained through the respondents' questionnaire forms. The forms were sent to twelve specifically selected individuals who met the criteria for population education specialists listed in Chapter 3.

Dr. Chaiwat Panjaphongse, an assistant professor and former Director of the Population Education Center, Mahidol University, Bangkok, Thailand provided his assistance in administering personal interviews to six population specialists in Thailand, including his response. Another two Thai experts responded by mail. These eight Thai specialists were concerned individuals, active in adopting population education programs in Thailand.

There were four persons in the United States who were asked to share their opinions and ideas through the questionnaire. These persons had been involved in developing population education program in Southeast Asia, especially in Thailand, and in the United States. Three of them had experience and had been involved in curriculum development and education programs in Thailand.

Two persons with most of their work in public health education and community development were also chosen as respondents to the opinionnaire, one of them from India and another from Korea. These two

panelists had been involved in the same kind of work in economic and demographic situations similar to Thailand.

The number of panelists selected to provide information useful in developing curricular guidelines was limited to fourteen. The opinions and much of the thinking of these panelists provided information relevant to the first six sub-problems in the research design, and suggested a way to develop a population curriculum guide for preparation of prospective population education teachers. The list of panelists who provided such information, and their affiliations, is included in the appendix.

Format For Data Analysis

The analysis and interpretation of the data are presented in two phases as follows:

Phase I deals with information relevant to the first six sub-problems of the research design. These were then related to the five major steps of the curriculum planning process suggested by J. Galen Saylor and William M. Alexander:¹

1. Basis (External variables)
2. Goals, objectives
3. Curriculum designing
4. Curriculum implementation (Instruction)
5. Curriculum evaluation

¹J. Galen Saylor and William M. Alexander, Planning Curriculum For Schools (New York: Holt, Rinehart and Winston, Inc., 1974), p. 27.

Phase II. In chapter 5 is the presentation of the inferences for population education training programs for prospective population education teachers in Thailand. Partial validation of the curriculum guide developed through the use of inferences is also discussed in this chapter.

Presentation of Data

Phase I. Presentation of the analysis and interpretation of the data relevant to the first six sub-problems of the study; namely:

1. What should be the objectives of population education programs for the secondary school teacher who would participate in teaching population education in the Thai school system?
2. What educational prerequisites and/or experiences were recommended?
3. What should be the expected roles for graduates within the schools and communities?
4. What specific courses, experiences, and competencies should be included in the curriculum? How should these be organized?
5. How should the effectiveness of the graduated teachers be evaluated?
6. What recommendations should be made for curriculum change in the future?

It is important to note that the responses to the questions which dealt with information concerned with the first six sub-problems of the study represent the opinions of the panelists. Logically, there would be some differences. However, their general agreement was reported wherever it was found.

Documentation from the available literature was used to support the panelists' views when appropriate.

- (1) What should be the objectives of population education programs for the secondary school teacher who would participate in teaching population education in the Thai school system?

The question of an appropriate statement of objectives within the framework of a developing population program for teacher preparation in Thailand had received considerable attention, especially since the program would be of benefit to the extension of population education in the Thai school system.

The following two paragraphs represent the view of the panelists. Ten of the panelists agreed unanimously that the objective of the population education program for Thai teachers should stress the knowledge and understanding of an overall conceptual framework of population education. The prospective population teacher must develop understanding and attitudes about the effect on population and economy, which could be done by providing these teachers a cognitive structure that would guide the teaching and learning.

Two panelists suggested that the objectives of the population education program for Thai teachers should be determined by the Thais. However, one of the two panelists presented her general ideas of what should be the objectives for this program. Her suggestions were similar to those of the other panelists.

Illustrative examples of responses follow:

The objectives of the curriculum should provide the prospective population teacher understanding of population problems and solutions to the problems. Family planning and birth control must be included.

To prepare the prospective population teacher to understand the rapid population growth condition and its problems. They should have a role in prevention and solution of problems of rapid population growth. Provide them with the skills and competencies for entering the profession.

The objectives of population education must be compatible with the national population policy. It must provide the prospective population teachers knowledge of the implications of population growth on social and economic development. The prospective population teacher should also be aware of other population problems, including how to prevent them and how to solve them.

To prepare them to realize how the growth of the population worsens the Thai socio-economics and quality of life of the population. Attitudinal behavior should be changed to fit the environment and national resources. Experiences to approach all population matters to change the students they are going to instruct must be excellent.

To create an awareness among the teachers about the need for population education and sex education in schools. To equip the teachers with knowledge and materials to teach sex and population education from primary school to high school.

I think these objectives need to be determined by the Thais. Objectives could vary from understanding population concepts to understanding the population situation, to preparation to integrate specific population concepts into the teaching each student does after graduation, to commitment to reducing the growth rate and ability to teach for achieving such reduction. I do not think an outside person is the one to determine which of these objectives are desirable within a country.

To these objectives, I think, the population education curriculum for teachers should be designed to understand the overall conceptual framework of population education that involves the understanding of correlations and interdependence of natural environment and human existence such as: in Thailand, it may be,

- 1) population versus better living,
- 2) population versus more education,
- 3) population versus better health,
- 4) population versus better family,
- 5) population versus better neighborhood, community and nation, and
- 6) population versus better service to religion, and considerable variables which mean something to the learner for their motivations.

Both Thai and international panelists viewed the objectives for preparation of prospective teachers for teaching in population education programs as a competency based approach. It was similar to the one described by Norman R. Dodle and H. Del Schalock, which assumes the following:

1. Rigorous criteria for knowing, as well as systematic specification of what is to be known (knowledge), must be part of teacher education.
2. Knowing and the ability to apply what is known (performance) are two different matters.
3. The ability to attain specified objectives with learners (product) represents still another kind of competency that will be required of teacher candidates.
4. The criteria for assessing what a prospective teacher can do (performance) should be as rigorous, as systematically derived, and as explicitly stated as the criteria for assessing either what he knows (knowledge) or what he can achieve in learners (product).
5. Assessments of knowledge, performance, and product must be described and made systematically.
6. Only when a prospective teacher has the appropriate knowledge, can perform in a stipulated manner, and can produce anticipated results with learners, will he meet competency based requirements.²

The focus of a competency based teacher preparation program is on three criteria: knowledge, performance and product. These three criteria were mentioned by the panelists in general. Suggestions by the panel ranged from providing the prospective population teacher the knowledge of population trends, sex education, family planning and family life education to skill in performance of teaching population education during training.

²Norman R. Dodle and H. Del Schalock. Competency Based Teacher Preparation (Berkley, California: McCutchan Publishing Corporation, 1973), pp. 46-47.

Precise statements describing the level of attainment which prospective teachers need at the end of training occasionally emerged. These statements specified change in attitude of the learner after preparation for population education. The expected changes of attitude of the prospective population teacher suggested by panelists were:

- (1) positive understanding of population education
- (2) awareness of the effects of rapid population growth on environment and national resources
- (3) appreciation of culture patterns and family planning practices.

The expected change of behaviors which prospective population teachers should demonstrate at the end of training as suggested by the panel were:

- the graduated teachers would possess the skill and competencies for entering the profession
- the graduated teachers would be able to apply their knowledge to the school children in simple and understandable language.

It was obvious that the educational objectives in the teacher preparation program in population education in Thailand suggested by the panelists consisted of the development of cognitive skills as well as the ability to transfer the knowledge received from training to the teaching situation in the classroom. They specified level of attainment required of prospective teachers at the end of the program. Also the determination of these requirements should include describing the tasks which prospective teachers are expected to accomplish at the

end of their training. Such requirements must be met by identifying the knowledge, attitudes and skills required to perform the tasks adequately.

(2) What educational prerequisites and/or experiences were recommended?

In responding to this sub-problem the opinions of the panelists might be categorized in two ways: there should not be any prerequisites pertaining to population education knowledge, and the prerequisites should be within the area of general educational background and teaching experience. Population education is considered as a part of teacher education. The educational program dealt with in this study would provide opportunities for those teachers who were interested in teaching population education to prepare themselves for teaching it at the secondary school level.

In this respect, some representative responses are presented.

There should not be any prerequisites; the population education program should be arranged to fit any group of learners.

Population education should be a required course; no prerequisites are recommended.

The population education program is part of teacher education and requires no prerequisites other than those for teacher education.

Population education programs should be designed to cope with any age group and knowledge level of the learner. There should not be any prerequisites.

There should not be any prerequisites and/or experiences for teachers with respect to population education because population education is related to all other components of curricula directly or indirectly in the formal education system.

There was considerable agreement among the panelists, regarding the need for prior experience and general teacher education background as indicated by the following illustrative responses:

The participants should be active teachers who have experience in teaching regardless of the type of certification or degree possessed.

The participant should have minimum knowledge, and Associate degree in education and general knowledge in statistics plus a year of experience in teaching.

The prerequisites should include knowledge of methods of teaching, problem solving, planning, and decision making processes and teaching experience.

The teacher who possesses a degree in social science would be adequate.

The population education teacher should possess qualifications the same as other teachers. The population education needed will depend on what level is to be taught and whether as a separate course, or infused into other courses, etc.

With careful determination regarding the views of the panelists presented here, the requirements for the background of the teacher before entering the program were identified. This requirement would range from the teacher who possesses only teacher certification at any level to the teacher with a bachelor's degree with previous teaching experience. Population knowledge background is not a major concern because those teachers would be provided such knowledge during training in the program. The desire of the panel was to build knowledge of population education on the teaching experiences and general education foundation. It should be mentioned here that the teacher in the population education program should be a mediator between population knowledge and potential learners, not a provider of knowledge. One panelist mentioned the knowledge of methods of teaching,

decision making processes and teaching experiences as requirements. The experienced teacher would be able to mix teaching methodologies to prevent fatigue and boredom of the learner during the teaching learning process and the experienced teacher would adjust to this flexibility in teaching.

Additionally, waiving of requirements for the specific type of teacher certification and degree would encourage teachers in every small town of the country to be interested in participating in the program. This would help in rapidly expanding the population education program throughout the country.

In conclusion, the panelists made two recommendations for prerequisites for the teacher entering the program:

(1) There should not be any prerequisites relating to population education background and population knowledge.

(2) The participants should be teachers who have a minimum of one year experience in teaching with no specification of the type of certificate and degree possessed. In this respect the requirement ranged from any qualified teacher with no degree to a teacher with a Bachelor's degree.

(3) What should be the expected roles for graduates within the school and community?

Concerning the future role of the population teacher both in school and the community, the panelists agreed unanimously in their opinions. They expected that population teachers should be uniquely qualified to serve as coordinators of population education activities

in the community and also they should provide educational leadership to school faculties, students and community. Looking at the roles of population teachers, the largest part of their roles is teaching and population education leadership in the community, as indicated by the following illustrative responses:

The population teacher should be the leader in population education both in school and community by being cooperative and participating in population activities in the community. He would be the resource person for population education. He would help other teachers to integrate population education into other regular courses. He also would help in initiating special activities in population education for all students in the school.

The population teacher would be teaching in public school the same as other teachers and also he must be a resource person in population education for the other faculties within the school. The population teacher must provide help in any population activity in school and community and also write population information for the local newspaper.

The teacher who graduates from the program would have a role as a population education coordinator, he would be working with a family planning team in the provincial area. As a coordinator of the family planning team, he would be teaching and demonstrating information concerning population education.

The philosophy and basic principal role of the population education teacher is to give academic training in population education to individuals both in school and in the community. Practically, if these population teachers do not receive proper training directly or are put into a position that is not directly concerned with population activity, it would be only a waste.

The population education teacher would have the following roles:

- As a transformer of knowledge
- As a change agent
- As a propagator of socially desirable norms and attitudes.

The role of the graduate will depend upon a number of things, as

- (a) The type of work assigned to undergraduates
- (b) The need for supervisors, coordinators, program planners, administrators, professional teachers
- (c) Community workers required at that level of work, etc.

Graduates should take leadership roles in the school and community. They should take an active part in community organizations and provide linkage between what is taught in the school and community activities.

They should be practitioners of family planning in the community and well versed to teach any class from primary to high school on population and demography.

I think there are two distinct role alternatives:

1) Teacher in the public schools - main role to integrate population concepts into regular classroom teaching; to a limited extent, the teacher would try to influence the school and other teachers to also teach population concepts.

2) Alternatively, there are leadership roles: administer a program, or help teachers integrate population concepts via special training or through encouraging the educational system (school, grade, district) to develop such teaching.

In the formal school system, he or she may be in charge of population education in relation to his or her primary teaching role and functions. This teacher can be related to community population education in the non-formal educational system such as community development, agricultural extension, religious education, welfare work, youth activities, women's associations, or senior citizens' organizations, etc. The educational program should be coordinated and related between the involved agents.

The panelists' views demonstrated above show convincing evidence that there is a great need to help the prospective population teacher to develop leadership qualities during the training program. It is important for prospective teachers to understand their future role clearly in order to prepare themselves to reach maximum professional performance. These population teachers would have to make their decisions based on the situation in the field. The training program should provide learning opportunities that can help the prospective teacher to analyze the important functions of their roles and the consequences of their actions. The process should lead to their achievement of professional performance in the future.

In conclusion, the panelists' viewed the role of the population education teacher, both in the school and community, as follows:

1. Population Education Teacher: The population education teacher would be a disseminator of population education concepts both in and out of the school system. He must be the leader in population activities of both school faculty and students. He would participate in school curriculum planning, curriculum development, and evaluation processes.

2. Leader and Motivator: As a leader and motivator, the population education teacher would establish a favorable climate for purposeful change. He must be a mediator between a body of knowledge and potential learners, and teach them how to learn to understand population phenomena and population concepts. He must be a resource person, who understands the wide scope of population education and possesses the relevant skills.

3. Coordinator and Advisor: The population education teacher as a coordinator and advisor would provide information concerning population phenomena and necessary data to the local government and/or any social science team that might participate in population programs in the community, such as a public health and family planning team.

The population education teacher would help the educational administrator in school and in the community in determining needs, developing plans for study and activities, and assisting in carrying out a population education program within the school and community.

All of the roles in which the population education teacher is expected to be involved in the school and community were described

in this section based on views expressed by specialists in the field.

- (4) What specific courses, experiences and competencies should be included in the curriculum? How should these be organized?

In determining what should be the content of the curriculum, James Thornton and John Wright suggested that the content must be significant and must bear the clearest relationship to the world in which the learners live. The content must be needed by the learner and the society and this need must be urgent. They emphasized that the content must be valid and true, and must be a direct function of the school rather than other agencies of society. The selected content must be effectively applicable in the teaching situation. Finally, they remind us that the content selected must be consonant with the stated objectives and must yield results to accomplish those objectives.³

The writer felt that the selection of content learning experiences should follow the preceding criteria. It was unfortunate that there were very few resource books or references in the field of curriculum development written by Thai educators without following guide lines based on Western philosophy. The writer believed that the selection of content for the program should be based on Thai culture and the structure of Thai society. In the field of population and family life education, the content and learning experiences of the curriculum might contain subject matter that could be offensive to the beliefs and attitudes of Thai people.

³James W. Thornton, Jr. and John R. Wright. Secondary School Curriculum (Columbus, Ohio: Charles B. Merrill Books, Inc., 1965), pp. 64-65.

Since the goals of the program were directed toward the overall expansion of population education throughout the country, the content and experiences provided in the population teacher training program would be the same as the content and learning experiences provided for the school children.

The selected content and learning experiences for the school curriculum should include consideration of the following factors: religion and beliefs of the people in each community, the attitude of the people towards family planning, and the political policies of local government agencies.

In order to obtain a wide range of information concerning the selection of content and learning experiences for the program, the panelists were asked six different questions as follows:

1. What curricular experiences (courses, etc.) should the curriculum contain?
2. What professional preparation is necessary for teachers to be able to implement and direct population education in Thailand?
3. What administrative skills should be included in the curriculum?
4. What about field work as a part of preparation?
5. How should the study of abortion be handled in the population education program in Thailand?
6. How best might these experiences be organized?

The responses of the panelists to these six questions yielded results which were used for answering the third sub-problem of the study. In recommending what specific courses, experiences, and

competencies should be in the curriculum and how to organize the experiences, the panelists' recommendations fell into two main categories: (1) determination for curriculum content and learning experiences; (2) organization of learning experiences.

Curriculum Content and Learning Experiences

Decisions about selecting the content and learning experiences to be included within the scope of a meaningful population education program for Thai teachers must be based upon careful analysis of the needs of the learners with regard to their health, family and community. It is necessary to determine the major problems that relate to population education and how to provide population education instruction which would enable the learner to adjust to social forces and trends. The cultural background of the learners and the resources of the community were to be included in this determination.

To define the content and learning experiences of the population education curriculum for Thai teachers was a crucial and difficult problem. The curriculum was the sum total of student activities which the school sponsored for the purpose of achieving its objectives.⁴ One of the panelists suggested,

. . . the courses and practical experiences can best be determined in relation to the type of program the country sets, what are the objectives to be achieved through the schools, etc.

The major objective of this study aimed at a just and adequate quality of life for all Thai people despite the high rate of population

⁴Harold B. Albery and Elsie T. Albery, Reorganizing the High-School Curriculum (New York: The Macmillan Company, 1962), p. 262.

growth and existing population problems in Thai society. The population problems existing in Thai society were similar to the population problems in other developing countries throughout the world. Such problems were caused by lack of knowledge in family planning, family management and family decision making processes. The consequence was over population followed by poverty, sickness and starvation. The views of the panelists reflected a high degree of understanding of such causes and consequences of rapid population growth in Thai society. Among the twelve panelists, six Thai and four international panelists made recommendations; two panelists felt it was inappropriate to respond to this question. The views of the ten panelists showed that there was wide concern regarding the current rapid growth of the Thai population and the effect the growing numbers of people have on Thai society and economic development, individual health and family life, and the resources of the environment. The panelists felt that the prospective population teacher needs to be familiar with, and to understand the nature of the population problems. They recommended that the curriculum content and learning experiences provide the students both cognitive and behavioral skills. In general the panelists recommended that the content and learning experiences should consist of general population education concepts, such as trends in population growth, population statistics, population problems, and population and family life.

Another interesting area recommended was family management, which would include an understanding of the processes and functions of the

family unit, and understanding of family management processes and decision making.

The area of human development was also recommended by the panel. The content and learning experiences would involve knowledge of human development processes and the relationship of those processes to the resources of the social and physical environment.

The responses concerning the selection of content and learning experiences are demonstrated as follows:

There should be basic knowledge of demography and population problems, which includes population policy and the solutions to the problems; also the knowledge of preparing teaching materials.

The content and learning experiences should cover the areas of basic demography, population statistics, family planning, methods of evaluation, instructional material preparation and other general educational courses.

The curriculum content should provide a variety of courses dealing with causes and effects of population change and rapid population growth, family life cycles and family decision making processes.

Areas that I think need special training are:

1. Population concepts (relation of population to reproduction, family life, economy, environment, policies and the future need to be included)
2. Strategies for change (the present educational system rarely includes population education)
3. Teaching methods (traditional teaching methods—reading, lecture are not adequate to teaching; a change in behavior is a desired outcome. I think it usually is, in population education).

Also useful; Materials development

If the person is to "direct" population education, administration, training skills, and evaluation skills are also needed.

The content and learning experiences must consist of the following areas: sex education, birth control, reproductive systems, and mortality, health evaluation, psycho-social, economic and other factors affecting acceptance of family planning methods, integrations of family planning with other services.

Population education: population concepts, strategies for change, and teaching methods that involve interaction among students and between students and faculty.

Materials development

Administration) If the intended role is more than the role
Evaluation) of a teacher but also an administrator/
Training) leader

The curriculum experiences should include the understanding of population policy of the nation and the meaning of population education. There should be courses in problem analysis by selecting the appropriate problem for the learners and their environment in order to help the learner better understand the problem and to be able to select the appropriate solution.

Since a certain level of increase in population size is now inevitable, it is necessary to prepare learners to foresee concomitant problems which may be presented, such as increased air pollution in Bangkok accompanying increased traffic congestion, a worsening of the water pollution situation and increasing numbers of people discard wastes in klongs, etc.

The samples cited above indicate that the selection of curriculum content and learning experiences recommended by the panel focused on these five areas: (1) general population knowledge; (2) the family unit; (3) family management process; (4) human development, and (5) resources and the environment. In general, the panelists seemed to agree that these five areas in population education were adequate and necessary for the content of curriculum in population education in secondary schools in the Thai school system. The recommendation also included the teaching methodology and the method of preparation of instructional materials.

One of the members of the panel reminded us that:

Before making decisions about what should be included in the curriculum of a population education program it is necessary to consider the policies of the country. We must know what is the direction of population in our country. If the objectives of population education aim at the understanding of the fact of the population phenomenon only, it would not concern much about population problems and their solutions. However, if the country intends to use population education for decreasing the birth rate

and slowing down the rapid population growth, population education would be only a tool for population control.

The writer recalls the statement of Mary Turner Lane and Ralph E. Wileman in conclusion of their search for the "what" of population education:

From our search, we concluded that population education is not just sex education, not just demography or population statistics, not just family life education. Population education incorporates ideas from all of these areas but in a broader, more dynamic structure. Population education focuses on understanding the population phenomenon as we experience it today as well as understanding the dynamics of population of the past and future.⁵

From the above statement, it could be seen that in no circumstance would the subject matter of population education exclude the subjects of sex education and family life education, which are the major part of the principle of family planning, the major strategy in combating rapid population growth in developing countries such as Thailand.

It was obvious that the adoption of population education in Thailand was intended to find a solution to population problems through educational processes by merging the population phenomenon into the mainstream of education for examination and understanding. This application relied on the belief that educational processes would be able to make changes in the individual, to develop abilities, attitudes and other forms of behavior of positive value to the society in which he lives. However, there were no guarantees that education could solve all problems. This was one reason why population education could not be defined only as the process of informing about the facts concerning population phenomena,

⁵Mary Turner Lane and Ralph E. Wileman, A Structure for Population Education (Chapel Hill, North Carolina: Population Center, 1974), p. x.

The panelists agreed unanimously with Turner and Wileman with regard to the areas of subject matter that should be included in a population program for Thai Teachers.

In regard to the professional preparation that is necessary for prospective population teachers to implement and direct population education in Thailand, the panelists' views suggested several areas in which the prospective population teacher should be experienced during the training period. The following samples of the panelists' views reflect the type of learning experiences that should be included as a part of preparation of these teachers for their future roles:

I want to recommend those teachers who have relatively more community and socially oriented backgrounds. In addition, they should definitely need a culturally oriented humanistic approach for successful human relations. This is crucial for the change of attitudes through motivation. I also recommend that this professional educator should have some experiences or should work through the community development system in Thailand in order to reach a majority of population. For the formal education system, the professional educator in population education should have experiences in curriculum development. This would eventually tie to the edition of new textbooks along with the integration of population education in its formal school system in Thailand. This person mentioned above should have a background of population education of a kind described in the answer to question No. 1 (Objectives of the program)

Courses in the program must include the philosophy of education and community which includes a concern for total life of the people in the community; such courses as:

- a) Population study
- b) Demography
- c) Ecology
- d) Communication process
- e) Educational Methodology
- f) Population Education

As a population education teacher and a member of the community development team, the program should provide the prospective population education teacher with a good background in population education and teaching experience in this area. The course in preparation of population education material must also be included in the program training.

The prospective teacher should possess good understanding of population problems and techniques of presenting the problem and the solution of the problem to the students in school and the people in the community.

It is obvious that the population teacher would have several roles in the community, as well as in the school system, within the rural areas of Thailand, as was indicated by the views of the panelists in the previous section. It was also the intention of the government and Thai educators to encourage the population teacher to work as a member of a community development team. The above samples of the panelists' views indicated that knowledge and experience in community development are necessary in the program, because it is the main stream educational process of which population education is a significant part.

The major role of population education teachers would be to work in the school and the rural community. The expected roles of these teachers, indicated by the panelists' views, showed a great need for providing the prospective population teacher with administrative skills.

In responding to the question of what administrative skills should be included in the curriculum, the panelists indicated that the program should provide learning experiences for the development of skills in accordance with the administrative duties that would be required of the prospective teacher.

Some representative views of the panelists in this aspect are as follows:

To develop leadership skill by providing the prospective teacher the opportunity to assist leaders in the local school. This opportunity should be provided in the form of field experiences. During field experiences, this teacher may serve as a resource person in population education to other teachers.

He may occasionally participate in meeting with educational and community leaders in order to gain experience and administrative insights.

This cannot be visualized unless the role and functions of this teacher in population education and his organization's role and objectives are spelled out in clear terms. However, some suggestions might be helpful in general, for the teacher in population education.

- 1) organization and leadership,
- 2) coordination and cooperation,
- 3) knowledge of interdisciplinary work,
- 4) team work concept,
- 5) knowledge of needs assessment,
- 6) management by objectives,
- 7) decision-making,
- 8) policy, rules and regulation,
- 9) pursuance for effective and efficient administration, etc.

Methods and Materials Management

Professional and subprofessional personnel management

Teaching and field service supervision

Research in acceptability of small family role

Relate field work to classroom teaching

Skill for working toward changing the educational system

("innovation," interpersonal skills, organizational skills).

Understanding of and ability to develop goals for population education.

The administrative skills of the population teacher should include administrative processes such as: decision making, planning, organizing, communicating, stimulating and evaluating. The prospective teacher should have the opportunity to practice the skills through field work experiences.

The skills that should be organized into categories of administrative skills needed by the prospective population teacher who would be working as a leader and coordinator in the school and community are those skills in group process; skills for determining the needs of the school and community in order to find the means to meet these needs; and to evaluate the success of the approach.

According to the above sample of representative views of the panelists, the recommended skills are those that characterized the supervising administrator role. The skills most recommended by members of the panel were essentially those skills developed through group

process; namely human relations, communication, organization, planning, management, problem solving and evaluation. The provision of these skills in the curriculum would help the prospective teachers in the supervising administrator role to smooth the path of human interaction and to increase efficiency in communication among group members, which should lead to successful operation of the population education program.

Viewing field work as a vital part of the preparation of population teachers, the panelists' views reached unanimity. The panelists considered that the provision of field experiences as a part of the curriculum would provide the prospective teacher the opportunity for creating new ideas and experiences in actual population education activities. These experiences would increase the efficiency of their future performance. Following are some examples of the panelists' responses:

Field work is important in training the population education teacher and it should be included in the program. The field work should consist largely of significant work necessary to the future role of the prospective teacher.

I think some experiences work in classrooms, special teaching projects, schoolwide presentations, or adult education experiences would be useful. The problem would be to develop the experiences with enough support supervision so that they would be good learning experiences.

Field work as a part of preparation is necessary for the prospective teacher. The experiences provided in the field must be similar to the kind of work that this teacher would be responsible for as much as possible. Field experiences should cover from planning process through the final evaluation.

Field work is a very necessary part of the training program for population education teachers. Through the field work experiences, the prospective teachers would become acquainted with their roles. They will gain a better understanding of local problems and practices. They would be able to use both theory and practice which would raise the level of their competency for future roles.

Field work should consist of teaching and supervision in the population education area which may be a major course or integrated with other courses.

Visits to urban and rural health and family planning welfare centers is excellent by involving them in survey and service areas.

Review of the above responses led to the conclusion that the effective field work program should provide significant learning experiences necessary to future roles of the prospective teachers. The panelists viewed field work as a means to help the prospective population teacher to experience the way in which individuals work together successfully as a team. They would have better understanding of individual and group behavior, which included administrative skills. Several administrative skills may develop during field work experience; such skills as planning, organizing a group, problem solving and evaluating. Mastery of these skills would help prospective teachers in their professional adjustment, and in interpersonal relations within the group.

In the area of family planning for this program, the issue of abortion seemed to be the most crucial and most controversial in the area of curriculum development for the Thai school system. In general, Thai people seemed to accept regular means of birth control. However, abortion was not publicly acceptable as normal practice for family planning in Thai society. Thailand was a Buddhist country. The use of birth control in family planning was somewhat against the principles of Buddhism. Radom Setteeton explained the rules of Buddhism relating to birth control as follows:

Most Buddhists do not think that birth control is a good thing. There are three main reasons behind their thought. First, birth control violates the Buddhist's precept of 'Kill not.' This is due to the fact that the common method of birth

control known as abortion; to these persons birth control means abortion which means 'kill' and hence it is a sin. Second, birth control violates the rule of karma. According to the rule of karma, one will be reborn and gather the result of his deeds in the past life. Birth control prohibits the rebirth of a soul and thus it violates this rule of life. Third, a sterile male cannot enter the priesthood. In case sterilization is applied to a male as a means of birth control, its result will be that he loses his chance to engage in the highest form of merit-making, that of becoming a Buddhist monk.⁶

The above explanation indicated that the abortion issue should not be included in any part of the curriculum in the school system. Since Buddhism was the national religion of Thailand, the above stated basic principles of Buddhism were included at every level of the educational system of Thailand.

Regarding the question concerning how to handle the abortion issue in the population education program in Thailand, the responses were few. However, it did not affect the validity of the data for this study. The question concerning abortion was asked in order to determine if there would be any room for the abortion issue in the school curriculum. The response by one of the panelists suggested that knowledge of abortion should be provided to enable the prospective teacher to understand health aspects of abortion, in order to provide information to the parents and adult students in the community.

Representative views of the panelists are as follows:

I believe teachers should understand the health aspects of abortion. This would enable them to reply to questions by parents or adult students.

⁶Radom Setteeton, "The Problem of Population Growth in Thailand: With Emphasis on Food Production and Family Planning" (unpublished doctoral dissertation, Michigan State University, 1967), p. 133.

This does not suggest that the curriculum for the student should include the subject of abortion. There should be a provision for knowledge of abortion for prospective teachers only in the area of health.

I suggested that this component should be a part of the curriculum for the knowledge of contraceptive method, not for the teacher to deal with this situation. This should be left for the policy-makers in the country to decide over the matter.

Without a doubt, the views of the panelists supported the provision of abortion knowledge for the teacher, but there was none recommended for the school curriculum. Within the scope of this study, the abortion issue was not a major consideration. The central assumption of this study was that the achievement of population education would lead to the prevention of pregnancy before abortion was needed. Although less than 5 percent of the Thai population professed Islam and Christianity, the decision on curriculum content regarding abortion based on Buddhist principles was somewhat compatible with their beliefs.

Throughout the discussion of what specific courses, experiences and competencies should be included in the curriculum, the panelists viewed the learning experience as divided into two parts: (1) the courses that should be provided for the prospective population teacher in the training program, and (2) the content of population education knowledge to be included in the curriculum guide for secondary school teachers to use in teaching population education.

The content of population education to be included in the population teacher training program and the curriculum guide for secondary school teachers covered the following areas: (1) general demographic concepts,

(2) human development and the family, (3) human reproduction and family planning, (4) family management processes, and (5) resources and the environment.

In addition to these five areas of population education, the program must provide the prospective population teacher the following experiences:

- (1) Basic philosophy of population education related to community development processes
- (2) Supervising administrative skills
- (3) Teaching methodology and methods of preparation of instructional materials
- (4) Field work experiences.

In conclusion, the population education teacher training program should provide a curriculum that includes both knowledge in population education and the skills of administrative functions of knowing how to work with people both in school and community.

Organization of Learning Experiences

Preparing for an effective population education program requires understanding not only of population phenomena and demographic theory but also of basic statistics, sociology, human anatomy, physiology and ecology, and in fact, every other curricular area. Thus, population education involves more than simply learning the size of different populations. The content of the curriculum for population education, therefore, must provide different learning experience to cope with life experiences and needs of the individuals in their society. It was

obvious that the organization of learning experiences for a population education program must consist of: (1) central continuity of the core, (2) integration, and (3) other combinations of subject content.

Considering the views of the panel with regard to the organization of learning experiences in the curriculum for population teacher training in Thailand, their responses seemed to follow the above pattern.

Some of the responses were as follows:

- (1) The experiences should be integrated with all the subjects (courses) which may offer excellent opportunities for integration such as economics, sociology, health sciences, etc. Perhaps separate courses could also be developed for emphasis, and a course on teaching methodology for majors, if any, in population education. However, all teachers should have the necessary orientation.
- (2) I can imagine one course in population education, another on population program administration including evaluation, a short course on teacher training, and including students in the regular media development course(s) where the material they worked on would be population-related.
- (3) Select and specify the goals and objectives. Identify learning experiences and then form instructional patterns which relate to learning experience and students' performance.
- (4) Identify the basic knowledge and skills that are required to achieve the objectives of the program and the learning experiences should be organized around that knowledge.
- (5) The program should consist of two phases (1) provision of population knowledge, both theory and practical aspects, by inviting a specialist in the field as a guest speaker and (2) the prospective teacher in the program must have field training in population education in the community and rural areas.

The panelists gave the major emphasis to the ability of prospective teachers to be efficient in their roles after graduation. Their views seemed to suggest that the organization of the learning experiences must

provide prospective teachers a way to develop their skills through learning experiences toward the organization of each concept of population education. This suggestion focused on competencies; the panelists considered the subject content oriented toward performance. They agreed that the prospective teacher should possess the overall concepts of population education knowledge. The teacher must have good understanding of such knowledge and be able to transfer the knowledge to others.

The suggested pattern of organization of learning experiences through the panelists' views was described by Saylor and Alexander as the competency-based design. They described the characteristic feature of this design as follows:

In a competency-based design, the desired performances are stipulated as behavioral or performance objectives or competencies, learning activities are planned to achieve each objective, and the learner's performance is checked as a basis for his moving from one objective to another.⁷

The design focused on specific competencies as described above, involving sequential process, and demonstrable learning of the tasks, activities, or skills which constitute the acts to be learned and performed by students.⁸ The sequential process consists of two parts. The first is planning for review and reiteration of that which has been learned (skill, concept, value) which is called continuity. Another part is to provide for practice of an important learning, which

⁷J. Galen Saylor and William M. Alexander, Planning Curriculum for Schools (New York: Holt, Rinehart and Winston, Inc., 1971), p. 198.

⁸Saylor and Alexander, p. 199.

is a plan for extending the learning in depth to create sequence in learning.⁹

Gerald J. Specter stated that the organization of learning experiences must be a building process of one course on another in such a way that they build upon and expand ideas, concepts and principles. The process he described was called sequence. He explained that the process of integration implied both interrelationship of disciplines and the application of the knowledge and principles evolved to problems and issues of the day.¹⁰

The above discussion pointed to an important consideration in organizing learning experience in the curriculum; integration. The integrating function of the curriculum is an important part of the competency based design. This function would keep the learning alive and create the ability to apply a learning in new situations.¹¹

Responses by the panelists indicated that the central focus of the curriculum is on the body of knowledge in population education and its application. The organization of learning experiences began with reviewing the area of study as an introductory statement. Then a determination of goals was made. These goals were statements of general concepts which related to aims. They could not be directly measurable. The next step was identification of the main ideas or

⁹John D. McNeil, Curriculum Administration (New York: The Macmillan Company, 1965), p. 68.

¹⁰Gerald Specter, "Curriculum Inferences for Professional Education in Family Planning Administration" (unpublished doctoral dissertation, University of Pittsburgh, 1970), p. 104.

¹¹McNeil, p. 69.

major concepts of the content, providing supportive statements and generalizations. This step of the organizing process provided the opportunity to integrate population content into the other areas of the study. The fourth step was to determine the instructional objectives or behavioral objectives, which were statements that identified the expected patterns of behavior of the learners when they had completed the assigned learning experiences. After the instructional objectives were specifically determined, they were planned according to order and time frame. The instructional activities were selected in order to promote the attainment of the objectives within the time period. The preassessment was then performed, the instruction was given, and evaluation followed.¹²

The preceding discussion provided information concerning how to organize that body of knowledge in the curriculum which was the main part of the training program. The panelists suggested integration of experiences in administration, supervision, and field work into the curriculum. The integration of these three areas had occasionally been discussed in the answers to previous questions. The panelists, however, suggested that the case study method, problem solving, and group discussion should be considered as instructional methodology to approach students. Field work would give opportunity to integrate almost every skill of the learners if it was well planned.

¹²Saylor and Alexander, p. 202.

- (5) How should the effectiveness of the teacher graduated from the program be evaluated?

The evaluation of the effectiveness of teachers is an essential part of program improvement. It is the responsibility of the director of the training program to evaluate whether the performance of the population teacher was effective in the classroom and community. The success and failure of teacher performance would reflect the quality of the training program. Educators had struggled with the problem of determining the teacher's effectiveness for generations. Several conceivable means had been tried and all had been found inadequate in one way or another. What, then, should be the basis for evaluating the effectiveness of the teacher?

In answering this question, the panelists' views demonstrated several criteria that may be used as the basis for the evaluation. Some examples considered representative are presented:

It seems to me procedures for evaluation of the effectiveness of teachers should be worked out cooperatively by representatives of the groups concerned: teacher, administrative personnel, students and their parents.

Appraising the outcomes of the students enrolled in the school population education course to determine if there was any positive change in the students' behavior under defined control criteria.

Pre-teaching evaluation data should be compared with the post-teaching data from the students. If the difference is significantly more, then the teacher has been effective. In the field, the rate of acceptance will also have to be measured.

The effectiveness of the teachers should be evaluated on the basis of the level of achievement of the teacher; whether the objectives of the instruction were achieved as they were stated.

The above views indicated that the effectiveness of the teacher may be evaluated by measuring the extent of achievement of the instructional objectives. Evaluation does not involve only the teacher and the students. It also involves administrative personnel and perhaps the parents. In order to evaluate effectiveness resulting from teacher performance and quality of instruction, the school administrator and/or the supervisor must jointly determine the appropriate instructional objectives and the criteria which they would use to measure the expected level of achievement of the student. Then the teachers would get together with the students and explain the plan and the objectives of instruction. The teacher must state objectives clearly related to the evaluation of the degree to which the learner was able to perform in the manner desired. The provision of clearly defined objectives would help the student to evaluate his progress at any place along the route of instruction, and to organize his efforts into relevant activities. With clear understanding of the instructional objectives, the student would know which activities on his part were relevant to his success.¹³ After the student had understood the plan thoroughly, the classroom transactions would proceed. The teacher would then be accountable for achievement of the instructional objectives. The effectiveness of the teacher would be evaluated through his performance, based on the degree and the quality of achievement as predicted in the original objectives.¹⁴

¹³Robert F. Mager, Preparing Instructional Objectives (Belmont, California: Fearon Publishers, 1962), p. 4.

¹⁴William H. Lucio and John D. McNeil, Supervision: A Synthesis of Thought and Action (New York: McGraw Hill, 1969), pp. 249-50.

One of the panelists' views indicated that a change in fertility may be used as an evaluation criterion. This view was as follows:

If your instructional objectives and expected educational outcomes are specific and clearly defined, the effectiveness of the teacher should not be difficult to evaluate. Ultimately, changes in behavior of the population should be the best measure as indicated by the change in fertility and birth intervals.

The views expressed above showed that clearly defined objectives of instruction and expected outcomes were preferable. However, the change in fertility and birth intervals would be the best criterion.

The ultimate goals of the population education program developed in this study, were to change the behavior of the population in order to control fertility. The change in fertility may be used as an indicator of the achievement of the total program, and it reflects the success of teacher performance in the community. However, this is not direct measurement of the effectiveness of the teacher's performance, because change in fertility takes a considerable period of time and might be affected by several factors other than education. This criterion may be very useful in the future, after the program had been in effect a long time. At the time of this study population education in Thailand could not take total credit for the change in fertility of the Thai population.

Thailand was in the process of initiating a population education program in the school system. Evaluation should focus on the quality of preparation of instructional materials and teacher performance, as stated by one of the panelists:

Sound theoretical research would be desirable but is unlikely to occur much at an early state in program development. At the present, evaluation needs to center around the quality of materials and teacher's ability to use them (to teach population concepts). As students "graduate" from courses that include population, we need to evaluate how close the outcomes of the courses were to the objectives in terms of students' understanding and practice.

In other words, it could be said that the above views suggested that the basis for evaluation should be the degree to which the students had attained instructional objectives which reflect the effectiveness of the teacher's performance. The panelists also considered the quality and the utilization of instructional materials as factors that affect the effectiveness of the teacher. In keeping with this view, before application to the classroom situation, instructional materials should be tried out and evaluated in order to assure their effectiveness.

In discussion of how to evaluate the effectiveness of the graduate teachers, several criteria considered as the basis for the evaluation were recommended by the panel. The recommended criteria and instructional strategy met those criteria of the evaluation process described by Lucio and McNeil as follows;

1. Describe and define the intended outcomes of learning (what pupils need to know-what terminal behavior is desired).
2. Preassess the entry behavior of pupils, that is, their initial competence with respect to what is to be learned, and predict the expected levels of achievement.
3. Select and program the sequence of learning contacts required to reach the desired outcomes (what pupils are to learn).

4. Evaluate the extent to which specified results are achieved (what evidence is acceptable to show that pupils have achieved the requisite behavior-if pupils 'say this' or 'do this' they are demonstrating the required behavior).¹⁵

Lucio and McNeil also reminded us that the evaluation of teacher performance was an essential responsibility of the school administrator and/or instructional supervisors. They gave final recommendation that the procedures for evaluation of teacher performance should be based on the following considerations:

1. Early agreement is reached between the supervisor and teacher on what is to be judged and on the relevant criteria, and performance is evaluated in terms of the attainment of objectives which are realistic and actually attainable. The teacher is given every help to reach the goal. Consistent failure to achieve results is faced by supervisor and teacher, and in the case of new or probationary teachers affects recommendations for continuance on the job.
2. The evaluation procedures are clearly defined, known, and adhered to by all. Communication of the 'how' and 'why' of the teacher appraisal lessens the threatening aspects of teacher evaluation, because only that which the teacher contracts to do is evaluated. No rating devices, inventories of attitudes, administrators' written characterizations, evaluation interviews, or other devices are injected into evaluation process, if they were not originally included as a part of the appraisal procedure.
3. The evaluation of teaching performance is based on proximity; that is, those who are close to the setting of instructional objectives and their attainment should have this responsibility: administrators responsibility to others.
4. The authority of expertness is agreed upon as a major consideration. Expertness calls for the ability to predict the consequences of particular acts upon the learning of pupils. It is incumbent upon those who possess the most expert knowledge of teaching to use this knowledge to set instructional outcomes, to select and arrange learning contacts, and to evaluate results. This responsibility is shared

¹⁵Lucio and McNeil, Supervision: A Synthesis of Thought and Action, p. 245.

by teacher and supervisor. In the process both should grow in their professional competencies.¹⁶

To sum up, the panelists' views with regard to the evaluation of the effectiveness of the graduate population teacher were examined and analyzed within the theoretical framework. The conclusion was that the evaluation of instructional behavior was the responsibility of both administrators and teachers. The process of evaluation required clear statements, in behavioral terms, of the program objectives both at the institutional and classroom levels. The teachers were to be involved directly in identifying instructional objectives through highly specific measurable definitions. The evaluation of instructional behavior would be focused on predicted changes in pupil behavior rather than on the teacher as a performer. Finally, the evaluation must be comprehensive, systematic, and directed at determining the degree and quality of achievement as defined and predicted in the original objectives.¹⁷

6. What recommendations should be made for curriculum change in the future?

Since population education was a relatively new program in Thailand (started in the early 1970's) and had not become firmly established throughout the entire nation, it was perhaps premature to recommend any sweeping changes in curriculum. Those panelists who undertook to deal with the question confined themselves to general statements to the effect that curriculum (and curriculum change) should grow out of the

¹⁶ Lucio and McNeil, pp. 251-52.

¹⁷ Lucio and McNeil, p. 256.

particular needs of the Thai people, and the unique circumstances which prevail in that nation. It would be necessary for the present program to become firmly established and to function long enough for a thorough evaluation of its effectiveness to guide the way to program revision. With regard to this view one of the panelists previously stated as follows:

Sound theoretical research would be desirable but is unlikely to occur much at an early state in program development. At the present state, evaluation needs to center around the quality of materials and teacher's ability to use them (to teach population concepts). As students "graduate" from courses that include population, we need to evaluate how close the outcomes of the courses were to the objectives in terms of students' understanding and practice.

This view seemed to agree with the opinions of Sommai Wansorn,¹⁸ who described the future of population education in Thailand in his editorial column. He stated that lack of qualified teachers and curriculum materials were obstacles to the population education program in Thailand. The program had survived through aid from foreign and international organizations. The budget for the program was limited and the program might have to be discontinued when the foreign funds had been used up. This would affect the preparation of teachers and curriculum materials. To provide an effective population education program throughout the nation, good preparation of teachers and instructional materials must be the priority. Earlier in this chapter the panelists were quoted as follows:

¹⁸Sommai Wansorn, "The Future of Population Education," Journal of Population Education, V (August, 1978), 3-8.

There should be basic knowledge of demography and population problems, which includes population policy and the solutions to the problems; also the knowledge of preparing teaching materials (Emphasis added).

The content and learning experiences should cover the areas of basic demography, population statistics, family planning, methods of evaluation, instructional material preparation and other general educational courses. (Emphasis added)

Population education; population concepts, strategies for change, and teaching methods that involve interaction among students and between students and faculty.
Materials development
 Administration
 Evaluation
 Training

These views indicated that skill in preparation of instructional materials would help the teacher solve the problem. The future role of the prospective teacher may be that of curriculum coordinator, who would initiate activity to produce and provide the resource and instructional materials for the school and community.

To solve the problem of insufficiency of materials for population education, the curriculum coordinator in each local school system, with the help of the principal and the community leader, should make a survey of instructional resources available in the school and community. It was necessary to seek personnel resources available on the school staff and in the community that might be used to facilitate the provision of instructional materials.

Audio-visual equipment and supplies were very expensive items for local school systems in Thailand. Equipment and materials existed in many communities in various dispersed locations. If they could be located and catalogued, a more effective plan for their use could be

developed. The population education teacher should be able to develop instructional materials for classroom teaching with an inexpensive material which he/she might be able to find in the school or from the community. It would not have to be very sophisticated equipment. It could be simply made for the purpose of teaching. The writer believes the problem of instructional materials, except for text or movie projector, should not be a major obstacle to population education in local communities in Thailand. In some school systems, instructional materials other than audio-visual equipment would be more effective if they could arrange teaching activities to fit the situation.

Texts in population education were very scarce because there were not many specialists in population education in Thailand. However, it is necessary for the population teacher to have guidelines and resources for teaching which pertain to the areas that would cover the objectives of population education according to the needs of Thai society. For this purpose the prospective population teacher should be able to develop an improved manual or guideline after having had experience in the field.

In this discussion, recommendations for curriculum improvement for population education programs were analyzed. Since the program was in the process of implementation and it had not yet been well established, recommendations for change were not offered by the panelists. Only the suggestion for preparation of well qualified teachers and curriculum materials was made.

Summary

In Chapter 4, the analysis and interpretation of the data included information reflecting the views of the panelists relevant to the first six sub-problems. The analysis and interpretation of data yielded results that would be used as criteria for developing a curriculum guideline for a population education teacher training program in Thailand. The data described the structure of the curriculum guide which included: the goals and objectives, curriculum experiences and how to organize the experiences. The evaluation criteria for the effectiveness of the prospective teacher and recommendations for curriculum improvement were also presented.

Chapter 5

INFERENCES FOR A POPULATION EDUCATION TRAINING PROGRAM

Based on the analysis and interpretation of the data relevant to the first six sub-problems, gathered through the panelists' views, the criteria for developing a training program for preparation of population teachers were identified. This study was limited to the training program for secondary school teachers, who would participate in a school population education program, to meet anticipated demands for improvement of population education programs in the school system throughout the nation.

It was found that there was considerable agreement among the panelists as to the structure, objectives and content of the population education curriculum. There was little disagreement with regard to prerequisites for the teacher entering the program, but alternative views were expressed by some panelists. The concentration of the panelists views was on what the program ought to be doing in relation to the future roles of the prospective population education teachers and community development policies of the nation.

The findings indicated that there were three tasks in developing a training program for population education teachers. These tasks focused on the curriculum areas needed in the population education program existing in Thailand at the time of this study. The tasks could be described as the activities that needed to be accomplished. They consisted of setting the purposes and defining objectives,

selecting and organizing learning experiences, the internship. The analysis and interpretation of the data (Chapter 4) provided the inferences necessary to accomplish the foregoing tasks.

Setting the Purposes and Defining Objectives

Population education was a new area in the field of education, not only in Thailand but in all developing nations. Thai educators agreed to implement population education in the educational institutes of the nation. However, the problem was how it would be taught at every educational level when there were not enough teachers who were qualified to teach population education. It was assumed that population education teachers would be needed to provide leadership for initiating and expanding population education for all students in schools and for adults or youths who were out of school. The Thai educators recommended that at the teacher training level, population education should be taught as a separate subject. If it could be a compulsory subject for every student teacher, it would be most beneficial to the implementation of the program.

At this time there was no definite agreement about what would be the most appropriate means to teach population education. Teaching it as a separate subject, it would be necessary to have good preparation in several areas, such as competent teachers, effective curriculum, and adequate texts. This preparation would take a considerable amount of time. The problem of rapid population growth facing Thai society required immediate action. Reflecting this view, it was obvious that the purpose of adopting population education in Thailand was to solve

population problems by the educational process. The analysis of data indicated the prospective teachers who would participate in population education in the school system of Thailand should be provided with competency based training. They should be provided with cognitive skills as well as skill in transferring knowledge to the student in the classroom. The objectives should specify the degree of expected achievement of prospective population teachers at the end of the program, and they should be informed of the objectives.

The approach to population teacher education focused on defining objectives, which was a vital part of effective training. The objectives must be stated behaviorally and, more specifically, in detail. At the beginning of the program and during a portion of each unit, the appropriate behavioral objective must be clarified to the student in order to inform him of expected outcomes at the end of each section, and at the end of training. The course outline must describe in detail, step-by-step, the instructional objectives. Appropriate instructional media should be used when needed.

The data indicated that the purpose of this training program would be to prepare secondary school teachers for several roles in relation to population and community development. Therefore, the objectives of the program must aim at training teachers to serve as catalysts of self-help efforts in the school and community, also as supervisors, administrators and instructional materials producers both in school and community.

Selecting and Organizing Learning Experiences

The attainment of the objectives previously stated should introduce prospective population education teachers to the interdisciplinary science of population education and provide them with a foundation for more intensive and/or extensive exploration. The findings from the analysis of the data reflected the views of experts in the field, suggesting that there would be several roles and functions of prospective population teachers both in the school and in the community. Many of these roles and functions were directed towards the following: (1) the implementation of understanding of general demographic concepts, (2) increasing interest in the relationship of human population and the environment, (3) increasing participation of the Thai people in worthwhile health activities, and (4) coordinating and persuading community leaders and school administrators. This was necessary in order to involve more people in a greater application and use of population education knowledge to effect desirable change in attitudes to family life practices.

To reach the maximum achievement of the performance of the roles and functions described, the content of population education to be included in the curriculum of the training program must cover these areas; basic philosophy of population education related to the community development process, supervisory and administrative skills, teaching methodology and methods of preparation of instructional materials, and internship or field work experiences.

The knowledge of population education that would be the curriculum core for the program training and the content of the school curriculum included: (1) general demographic concepts, (2) human reproductive

systems, (3) human development and the family, (4) family management and family economics, and (5) resources and environment.

In organizing curriculum content and learning experiences, inferences could be drawn by constructing a structural pattern of curriculum activities. The structure began with reviewing areas of the study, stating goals and objectives, identifying the main ideas or major concepts, providing supporting statements and generalizations. The next step was to determine the instructional objectives. After the instructional objectives were specifically defined, the learning experiences were selected in order to attain the objectives within the time period. The preassessment was then performed, the instruction was given, and finally an evaluation made to assess the degree of attainment of expected outcomes.

The Internship

The internship or field experience was considered the most important part of the training program because it would relate theory, knowledge, and practice for competencies for future roles after graduation from the program. The findings indicated that the provision of field experiences as a part of training program activities would help the prospective teacher to develop new ideas and confidence during practice. The data indicated that the effective field work program would provide significant, effective learning experiences necessary to future roles of the prospective teachers. To work on the role of a supervising administrator, the experience gained from internship would develop administrative skills in working with others as a team. The internship would help the prospective population teachers understand

the future role clearly. Occasionally problems might arise during internship; the teacher would have an opportunity to make determinations for appropriate solution of the problem.

The other values of the internship, in addition to experience gained, are those positive attitudes towards people they work with, and appreciation of the humanitarian philosophy which underlies the population education process. Also the prospective teacher would gain value in understanding the characteristics of population activities in the community and steps involved in their functioning.

In some circumstances during the internship program, the prospective teacher would become familiar with examples of success and failure of some aspect of the population education program in the school and community, which might lead to the idea of doing research to find what would be the facilitating and/or inhibiting factors for such a population program.

To sum up, the internship or field work experience was one of the most effective instructional methods to build up several values and skills to achieve professional maturity before entering the profession as a population education teacher in the school system and community. Certain general conclusions came from the inferences drawn from the analysis of data. Views of the panelists indicated that the objectives of population education teacher training programs for participating in the population education program in Thailand must correspond with the national population policy. The instructional objectives must be behaviorally stated, and identify expected outcomes in such a way that the prospective teacher would know the definitions and understand

various concepts of population education; that is, understand their antecedents. Learning experiences should be selected and organized in order to provide the prospective population teacher the most realistic experience and competencies. The degree of achievement must be measurable.

These prospective population teachers would be participating in the population education program as supervising administrators, program coordinators, population education teachers, population instructional materials producers, and resource persons in the school and community. They would be a major resource in population education programs throughout the nation.

Content Validation of the Curriculum Guide

The curriculum guide in population education was developed for the use of secondary school teachers as an instructional resource. The content of the curriculum was also based on the findings from the analysis and interpretation of data in Chapter 4. In order to assure the accuracy of the analysis and interpretation of the data, and also to validate the content of the curriculum guide, the initial draft of the guide was resubmitted to the fourteen experts who provided data for the study, and one additional expert who was later recommended by one of the members of the panel as a specialist in the field of population education. This brought the total number of panelists to fifteen.

These fifteen experts were contacted by mail. Ten responded. Five responses provided comments and constructive suggestions for the improvement of the curriculum content, as follows:

These five panelists approved the over-all intent and selection of areas to be covered. However, they felt that there were some corrections needed to make it a more useful guide. They expressed the opinion that the selected areas in the curriculum guide were good, that the modifications from the opinions of the experts were appropriate, and the writer should provide the reason for such modification. They suggested that the essential areas needed in the curriculum guide were concerned with methods of helping teachers use teaching techniques that involved the learner.

According to the scope of population education activities in Thailand at the time of this study, this curriculum guide was considered to embody one of the necessary components of the total content that the learner needed to know. Since the remaining content (e.g., economics, health, disease, nutrition, etc.,) were already included in other subjects, it was not necessary to teach those topics again. However, during learning or studying about problem solving it was necessary to bring knowledge from other subjects to help in learning.

It was necessary to emphasize problem solving methods and processes, and use content from textbooks, social environment, culture and tradition, even self analysis, as data for solving problems.

In the matter of goals and concepts, this group of panelists felt that the two words were synonymous. Those goals that could be identified seemed suitable. They appeared to cover a great deal of the subject matter. The content and generalizations seemed definitely in the right direction to achieve the goals. The content should be described evenly, especially that dealing with learning and exercise.

They suggested that instructional objectives, in the sense of overall intent, should be made clearer. However, that may be impossible to do behaviorally, and therefore may not be satisfactory academically.

In some sections of the learning experiences, the panelists said that it would be a good idea to get the students teaching the other students, and to provide them an appropriate list of activities which would help them get involved in teaching each other.

One of the experts suggested that the proposed curriculum content should be called "suggested learning experiences" instead.

The other three responses of the panelists suggested additional information on environment and resources be added to the guide, and that the goals of the program should be narrowed and focused more specifically. Another suggested increased emphasis on the decision making process and problem solving. The content generalizations should include socio-economic and cultural factors. Population statistics are necessary but not sufficient. Therefore, they suggested that the definition or concept of environment must be clearly pointed out and some modern instructional media should be demonstrated more than traditional instructional media. It was suggested by one of the panelists in this group that in the instructional objectives for the section on population/demography, something needed to be described that the learner do now or in the future to have an impact on population and/or ecological problems.

In view of the fact that family planning issues may be very difficult to incorporate in school programs, there should be some

modifications dealing with family planning and spacing of pregnancies by couples. The contraceptive method which enables a couple to plan and space pregnancies also enables the couple to limit the size of their family as they wish. The terms "birth control" and "population control" are no longer widely used because of negative connotations. These terms should be replaced by saying that the widespread practice of family planning will facilitate reduction of rapid population growth. In relating to this area, learning about the importance of prenatal care, the health implications of birth spacing, the health risk associated with pregnancy, and the safest age for child bearing were suggested for inclusion in the curriculum content. In the area of food supply for the Thai population, the learning exercises must require the students to use actual projections which do not assume that there will be no change, and thereby come closer to reality.

The two remaining respondents indicated satisfaction with the analysis of the data and the format and content of the guidelines, topic by topic.

The overall comments and validation critique indicated that the curriculum guide in population education for the use of secondary school teachers in Thailand was generally accepted by the ten panelists as a useful guideline for Thai teachers. Those panelists from Thailand especially indicated that this curriculum guide would be useful and would be used as a reference in the population education program in Thailand.

Minor changes in, and additions to the guideline were made as a result of the critique by the panel of experts. It was considered

that the process constituted a content validation of the curriculum guide developed in this study.

Chapter 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The problem of this study was concerned with the development of curriculum guidelines for the education of population education teachers in Thailand. Correspondence, interviews, and questionnaire techniques were employed to secure information from available experts in the field of population education in the United States and Thailand. Based on the responses of the panel of experts and the related literature and research, curriculum inferences for teacher education in population education in Thailand were drawn and reported in Chapter 5 of this paper. A content validation of the curriculum guide was done by resubmitting the initial draft of Chapter 4, the inferences reported in Chapter 5 and the curriculum guidelines (Appendix B) to the panel of experts. The validation process and results are also reported in Chapter 5.

Changes in the interpretation of data (Chapter 4) and the guidelines were made as a result of the second responses received.

Conclusions

Based on the findings of the study the following conclusions seemed appropriate.

1. The objectives of population education programs for Thai secondary schools were adequately identified through the data collected from the panel of experts.

2. Only a minimal level of teaching experience was recommended for admission to population teacher education programs.

3. The content of population education teacher education programs should consist of two parts: that population education information which teachers will teach on the job after graduation, and those skills needed to deliver population education to the schools and to the communities they serve.

4. The content of the curriculum guidelines presented in Appendix B is valid according to the judgment of the panel of experts.

Recommendations

The following recommendations are supported by the responses elicited from the panel of experts, and by the literature and previous research in the field of population education:

1. Future population education teachers should be taught both the content of population education and how to use that content effectively.

2. The curriculum guide presented in Appendix B should be used as a curriculum resource for secondary population education programs in Thailand both in the schools and the communities.

3. An on-going evaluation should be made of the effectiveness of the curriculum guide as a framework for curriculum structure in

secondary school population education. As this process proceeds, revision of the guide should be made on the basis of progressive knowledge of its strengths and weaknesses.

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APPENDICES

APPENDIX A

**AN INTRODUCTION TO A POPULATION EDUCATION CURRICULUM
GUIDE**

An Introduction to a Population Education Curriculum Guide

In order to accomplish the purposes of the study, the population education curriculum guide was developed as a curriculum resource for Thai secondary school teachers who would use this guide for teaching the course.

During the years 1970 - 1981, several Thai schools offered population education by integration into several courses without changing the principle of those courses and the curriculum pattern. Those courses were sociology, mathematics and statistics, modern history, biology, etc. Because the philosophy underlying population education enriched the curriculum offerings and because the national policy encouraged it, population education was included in the curriculum to prepare young adults for the responsibilities of adulthood. Population education needed to be extended throughout this country. It was obvious that there was a need to provide curriculum materials to schools offering the course.

Purpose of the Curriculum Guide

This curriculum guide was prepared primarily for secondary school teachers who had an introductory course in population education, and those teachers graduated from population education program training who would participate in teaching population education in the secondary schools of Thailand. Emphasis is placed on the following areas:

(1) general demographic concepts, (2) human development and the family, (3) human reproduction and family planning, (4) family management processes, and (5) resources and the environment.

Steps in Constructing a Curriculum Guide

The content of the curriculum guide was developed in this study, based on the findings of the research, to meet the needs of the secondary school teacher who would teach population education in Thailand.

The structure of the curriculum guide consists of five parts in each area, as follows:

1. Introduction of the Areas of the Study
2. Setting of the general goals
3. Content generalization
4. Stating instructional objectives
5. Suggesting learning experiences or activities

The curriculum guide is designed for the use of the teacher as an instructional manual in teaching population education in the secondary school or equivalent level. It is separate from the major content of the dissertation, and is added as an appendix to the dissertation.

APPENDIX B

**A CURRICULUM GUIDE FOR SECONDARY SCHOOL POPULATION EDUCATION TEACHER
IN THE SCHOOL SYSTEM OF THAILAND DEVELOPED IN THIS STUDY**

**A CURRICULUM GUIDE FOR SECONDARY SCHOOL POPULATION EDUCATION TEACHER
IN THE SCHOOL SYSTEM OF THAILAND**

by

Manit Subhakul

Contents of Curriculum Guide

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POPULATION EDUCATION SPECIALISTS WHO SHARED THEIR SPECIALITIES AND ADVICE FOR THE DEVELOPMENT OF THIS CURRICULUM GUIDE

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Setting the General Goals
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Review the Area of Study
Setting the General Goals
Content Generalizations
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Suggested Learning Experiences or Activities

BIBLIOGRAPHY

**A SUGGESTED BIBLIOGRAPHY OF MATERIALS CONCERNING
POPULATION STUDIES IN THAILAND**

Preface

During the seventies and early eighties, population education had been the subject of the increasing interest to the Thai government, educators, and concerned parents. In early 1973, there was a very active movement to implement population education both within and outside the school system at all levels. The effort was supported by the Thai government, private and international organizations. To adopt population education at all levels of the school system is not a simple matter.

Without teachers, specialists, and instructional materials, it would be impossible to achieve the goals of population education.

The writer does not hesitate to join the effort to help the implementation of population education in the school system of Thailand. After careful thought and consideration, the decision was made to conduct the study to determine what would be the most appropriate guidelines for the population education program, and to develop a curriculum guide for the use of population education teachers at the secondary school level.

Population specialists, both in Thailand and from other countries, assisted in providing opinions and suggestions about the most appropriate curriculum content and organization. The writer wishes to acknowledge his appreciation and sincere gratitude to the specialists for the time, energy and thought that they contributed to the project, both initially and in the later content validation process.

Unlike some population education source books and texts, this curriculum guide is basically for the use of secondary school teachers and those teachers who would be teaching population education in the school system. Topics in this guide are designed to provide instruction in areas of concern to secondary school students (grades 10 through 12) or equivalent. The content of each topic may be offered as a separate unit or integrated into other subjects where applicable. Emphasis is placed on the following areas: (1) general demographic concepts, (2) human development and the family, (3) human reproduction and family planning, (4) family management processes, and (5) resources and the environment. Some areas of the contents in this guide are modified based on the suggestions of some panelists to suit the needs of Thai students and to cope with the cultural beliefs of Thai people.

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INTRODUCTION

The content of the population education courses for secondary school education focused on the relationship between the increase in population of the country, the improvement of individuals and their families, and above all the development of the nation. The curricular content would help students to develop positive attitudes, to acknowledge the population problems and to make an appropriate decision to find the best solution to the population problems.

From several definitions of population education defined by the specialists in the field, the meaning of population education could be expressed as follows:

Population education is the educational process for all individuals, both in and out of the school system, that would inform them and help them to understand causes and effects of the conditions of population change on the individual. The population education process would help individuals to develop positive attitudes toward population problems and to assume reasonable responsibility for the consequences of population change in order to improve the quality of their lives at the present and for the future.

During the past decade the world population increased more rapidly than it has in the past. Especially in the developing countries like Thailand, the mortality rate rapidly decreased due to advancements in modern medicine and public health services. Although the birth rate had not increased, the rapid decrease in mortality rates of the newborn

and other age groups caused the population growth rate to increase rapidly. The high rate of population growth was considered as an inhibiting factor in achieving the social and economic development of Thailand. Almost every Thai family on the level of low, low-medium and medium income experienced hardships from the demands of feeding, caring for, and educating the children in the family.

The rapid increase of population may be a factor that creates new social problems and worsens the existing social problems of the nation. In order to improve the quality of the individual by means of an education, success would depend on the quality of the program. If the Thai community consisted of low quality population, regardless of the quantity of the population, social problems would still occur. On the other hand, if the community had large numbers of high quality population, it would not be necessary to have social problems.

The quality of the population could be developed through the family and by the effects of education, both in and out of school. Good economic conditions would not always guarantee the quality of the population. However, a poor economy would make it very difficult to improve the quality of the population.

An awareness and understanding of population problems in a social-cultural context through the population education process would lead to a new basis of decision-making for individuals and their families, and a better understanding of the social and economic changes that would assure a just and adequate quality of life for all Thai people.

Emerging Concepts in Curriculum Content

The place of population education in the curriculum was justified by the fact that every Thai person, regardless of his role or place in society was confronted by family, health, and economic decisions, due to existing population problems. Such decisions required scientific knowledge and intellectual skills, including the knowledge of population and demography, critical thinking, problem solving, self-discipline, self-direction, and an awareness of population dynamics and the effects of population change on the individual and society. This knowledge could be developed within the educational framework. Population education was essential in the curriculum because many population problems were not being met adequately either by the family or by agencies in the Thai community.

The concepts and content of this curriculum guide were selected in relation to population dynamics, the consequences of population growth on Thai society, the impact of family size on maternal and child development, and the quality of family life through availability and use of resources. The population teacher must select the level and extent of the content for the appropriate groups of students, and try to use and illustrate custom and cultural factors as bases for teaching. Even the goals and objectives stated in this curriculum guide were derived to fit the needs of the Thai people. The teacher should consider the needs and other cultural factors of each institutional field situation. The lists of concepts and content generalizations were developed as guideline information and areas of knowledge from which a full specific teaching curriculum could be developed.

The concept generalizations were designed for the possibility of integrating with other areas of study.¹

The process of educating the student, developed in this curriculum guide, was based on the life, values, culture and beliefs of the Thai people. Thus, cultural beliefs, values, and concepts are presented as a beginning phase in the process of curriculum development.

With regard to how people learn, curriculum specialists stated as follows:

Learning and new insights are gained not from facts or content alone but also from the process and methods of the educational experience. Realistic problems of the people are the basis for effective, functional education, not abstractions of data. From their own experience people are able to incorporate those facts or knowledge that are relevant where the conditions of learning respect their integrity and encourage self-direction.²

From the above statement, it can be seen that it would be most effective in the process of population education to relate the facts of the curriculum content to the day-to-day life experiences of the people.

¹Home Economics and Social Programmes Service, Population, Family Life and Resources: A Population Education Curriculum Guide, (draft ed.: Rome, Italy: F A O, Via della Terme di Caracalla, 1974), p. 28.

²Home Economics and Social Programmes Service, Population, Family Life and Resources: A Population Education Curriculum Guide, p. 28.

AREA I. GENERAL DEMOGRAPHIC CONCEPTS

Review the Area of Study

Thailand was the same as the other nearby developing countries. There was an imbalance of social factors which had impact on the society, physical environment, the individual potential and their families. This was aggravated by the rapid growth of the Thai population. The imbalance of social factors developed social problem that had direct effects on the quality of lives of Thai people.

When the social condition of the nation indicated that the quality of lives of the Thai people was affected by population problems, it became the responsibility of the authorities of the nation to find appropriate means to solve the problems. The most appropriate means in a democratic society was an education which would help individuals develop themselves and become efficient citizens. They would share responsibility for the social problems and would seek solutions of the problems to improve the quality of their lives and the society in which they lived.

The education process could be defined as all experiences and processes that influence the individual to develop positive attitudes, knowledge, skills and change in behavior. Education is not limited to in-school situations, but occurs in day-to-day living as well.

From the above definition of the educational process, a population education program would provide young adults, both in and out

of school, an understanding of population dynamics, the process and effects of population change which directly affected their lives, their families and their nation. A better quality of life might not result from education alone. The achievement of population education for the improvement of the quality of individuals' lives cannot be evaluated directly, but setting the goal may encourage people to strive to meet it. In practice, then it could be assumed that the education process contributed to such improvement.

An understanding of the influence of population change on the quality of individual lives would help them make decisions for their families. The consequence would be improvement of the quality of individual families, communities, and the entire nation.

Setting the General Goals

The goals of population education are to develop an awareness attitude, and understanding about:

- (a) Demographic terms: The more accurately the student understands basic population and demographic terms, the better understanding of the subject matter he would have throughout the program
- (b) The condition of population dynamics and the effects of population change on individuals, family, society and the nation
- (c) The demographic process, and its effects on the socio-economic development of the nation
- (d) How the size of the national population affects resources and the environment

Content Generalizations

1. The basic population and demographic terms were defined by Mary T. Lane and Ralph E. Wileman as follows:

- A family is made up of people descended from a common ancestor or ancestors.
- The extended family includes one's grandparents, parents, siblings, aunts, uncles, cousins, nieces, and nephews in addition to one's spouse and children.
- The nuclear family is usually made up of parents and children alone.
- Family planning is the deliberate effort on the part of a married couple to control their fertility.
- The environment is the set of surrounding conditions, influences, or forces which modify the life and development of plants, animals, humans, and inanimate objects.
- Ecology is the branch of biology which deals with the mutual relations among organisms and between them and their environments; it is divided into plant ecology and animal ecology.
- Ecosystem refers to the interrelationship and organization of living things in a given place.
- Population is a particular group of inhabitants of a given locality.
- Resources are available supplies and support that can be drawn upon when needed.
- Natural resources are the supplies within, on, and around the earth which provide the support of plants and animals: oxygen, water, petroleum, and others.
- Human resources are human abilities to deal with a situation effectively.
- A census is an official, periodic enumeration of a population.
- The birth rate is the number of live births per thousand population per year.
- The death rate is the number of deaths per thousand population per year.

- The rate of natural increase is the difference between the birth rate and the death rate.
- Migration is the act of moving from one country, region or habitat to another.
- Emigration is the process of leaving the native habitat. (Those who leave are emigrants.)
- The rate of emigration is the number of emigrants per thousand population per year.
- Immigration is the process of entering a new habitat (Those who enter are immigrants.)
- The rate of immigration is the number of immigrants per thousand population per year.
- The growth rate is obtained by subtracting the rate of emigration from the sum of the rate of natural increase and the rate of immigration and is usually expressed as a percentage.
- Zero population growth is a stationary population in which population does not significantly increase or decrease in size.
- Urban refers to that which characterizes or takes place in a city.
- Suburban refers to that population area in an outlying part of a city or town.
- Rural refers to those areas which are distinctly agricultural and sparsely populated.
- The term overpopulation is used to denote that population which is too large to be adequately sustained by local, national, or world resources.
- Population density is the average number of persons per unit of area.
- Population distribution is the relationship of population density to a geographic area of concern.
- The dependency ratio is the numerical relationship of dependents to supporters within a given community or nation.
- Standard of living refers to the level of consumption of necessities, comforts, and luxuries by a person, or a nation at a particular time.

- Quality of life is an individual or group perception of the essentials needed for a satisfying existence.
- Labor intensive is an economic condition in which there is a large unskilled labor force.
- The gross national product (GNP) is the annual total value of (a) goods and services produced, (b) total expenditures by consumers and government, and (c) gross private domestic investment.
- Development is a stage of national modernization in terms of technology, manpower, resources, education, and social reforms.
- A population policy is a governmental course or a cultural practice which is intended to affect the size and/or structure of a specific population.
- A population program consists of activities implemented by a government or other organizations to achieve objectives relating to the size and structure of a population.
- Demography is the statistical description and analysis of populations in terms of distribution, vital rates, age, and sex.³

2. Population statistics was an important tool for measuring and describing the pattern of population change.

3. Age Structure (number at different age levels in the population) had an important impact on population trends, such as when a large youth population moved into the reproductive years and had children of their own (demographic momentum).⁴

4. The population was rapidly increasing, which ranked Thailand sixteenth highest in population in the world. In 1960, the population

³Mary T. Lane and Ralph E. Wileman, A Structure for Population Education (Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina, 1974), pp. 10-13.

⁴Home Economics and Social Programmes Service, Population, Family Life and Resources: A Population Education Curriculum Guide, (draft ed.; Rome, Italy: F A O, Via della Terme di Caracalla, 1974), p. 30.

was 26.2 millions and in 1970 was 34.4 millions, which made the average annual increase 800,000 people, or 3.1 percent. In 1977 the Thai population was 44 millions. The average population increase per year during that period was 1.3 millions, or 2.7 percent. Although the population statistics indicated a tendency toward declining population growth rate, the total number of people in the nation was still increasing because of the previous high total population.⁵

5. A nationwide census was taken in 1980 and reported on December 31, 1980. The population of Thailand was 46.9 millions, which consisted of 23.6 million males and 23.2 million females. Compared to the population in 1979, the Thai population increased 0.8 millions, or 1.8 percent.⁶

6. There were four sources of demographic data in Thailand:

- Census
- Registration
- Immigration records
- Incidental sources

7. There were limitations on the accuracy of data collections, and also restraint used in interpretation of available data.

8. Crude birth rates, rate of natural increase, general fertility, age specific fertility, etc., are population statistics that are used for some specific purposes as the population indicators.

⁵Vichit Sangtong, "The Increase of Thai Population and Social Problems," Journal of Population Education, V (August, 1978), 40.

⁶Thai News (Washington, D. C.: Office of The Information Attaché, The Royal Thai Embassy, Friday, March 27, 1981), p. 8.

9. Change in size of population, in a particular area and time, results from changes in the number of births, deaths and migration.

10. Increase of population resulting from the number of births over number of deaths has been referred to as natural increase.

11. The factor of migration cannot be applied to the analysis of world population growth because world population growth consists of natural increase only.

12. Until 1900, the population growth rate of Thailand was slow. It took over 700 years, from 1200, the data taken as the beginning of Thai history, to 1900, to reach a population of 8 million people. In the past, it took approximately one hundred years to add one million people; in 1972, it took less than one year.

13. It was mentioned in the previous section that in 1977 the Thai population was 44 millions. The average increase per year during that period was 1.3 millions, or 2.7 percent. In 1981, the population of Thailand was 46.9 millions, with the rate of increase 1.8 percent. These statistics showed a declining trend in population growth rate. However, the total population of Thailand was still high because of the previous high total population of the country.

14. The components of population change are fertility, mortality and migration. Estimates of level of fertility indicate that the crude birth rate has been rather constant in the past, but is likely to decline slowly in the future. The crude death rate showed a downward trend. The rate of 31 per thousand during 1930 to 1934 was reduced to 28 during 1935 to 1939; 24.1 during 1950 to 1955; 19.6 during 1960

to 1965 and it is estimated to be 11.0 during 1976-1977.⁷ In 1979, the death rate in Thailand was 9.0.⁸

15. From the available statistics, migration was not a significant factor in population change in Thailand. For this reason only fertility and mortality are considered.⁹

16. Population growth by itself cannot be evaluated positively or negatively. It must be considered in relation to time, space, and other factors, such as available capital and existing technology.¹⁰

17. The consequences of population growth are listed as follows: Shortage of land per person and food supply, increased problems concerning employment, decrease in per capita income, need for new investment, increase in unfavorable age-composition, increase in unfavorable age-composition, increase in health problems, and needs for expanded educational programs, etc.¹¹

18. Pregnancy and birth represent a physical reproductive event that is determined both by biological factors (age, health, sexuality, etc.) and social-cultural factors (laws, customs, values, family life, etc.).¹²

⁷Radom Setteeton, "The Problem of Population Growth in Thailand; With Emphasis on Food Production and Family Planning" (unpublished doctoral dissertation, Michigan State University, 1967), pp. 86-87.

⁸Population Reference Bureau, 1979 World Population Data Sheet (Washington, D. C.: Population Reference Bureau, 1979).

⁹Wanglee Anuree, "Population of Thailand," A Seminar of Population and the Improvement of the Quality of Life (Bangkok, Thailand: The College of Education and Department of Teacher Training, 1973), p. 46.

¹⁰Setteeton, p. 97.

¹¹Setteeton, pp. 99-112.

¹²Home Economics and Social Programmes Service, p. 37.

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¹⁰Setteeton, p. 97.

¹¹Setteeton, pp. 99-112.

¹²Home Economics and Social Programmes Service, p. 37.

19. Population change both affects, and is affected by, the social environment.¹³

20. Several social factors have been identified as contributing to parents' desire for more children:

high infant mortality requiring more pregnancies for a given number of children;

specific sex ratio, or number of males desired;

labor needs for rural agriculture;

social status from large family;

planning security for old age.¹⁴

21. Change in population patterns, such as historical population decline in more developed countries, is generally attributed to a number of factors related to modernization, economic development and industrialization, but an exact listing is yet to be determined. Frequently identified are:

mortality decline	family structure and functions
health improvements	improved communications
urbanization	rising levels of living
increased literacy	employment of women
school attendance	increased cost of children
(women)	change in religious values
modern technology	social mobility potential ¹⁵

¹³Home Economics and Social Programmes Service, p. 37.

¹⁴Home Economics and Social Programmes Service, p. 37.

¹⁵Home Economics and Social Programmes Service, p. 37.

Instructional Objectives

At the end of this unit the students and participants can:

1. define orally or in writing the basic population and demographic terms which were described in the content generalizations
2. describe or calculate the relationship among some demographic terms
3. identify the basic factors in social development on family life that would interact with population numbers
4. describe the trend of population growth and characteristics of population structure in different regions of Thailand
5. conduct and describe the process of taking a census in the given community and locate the sources of demographic data in that community
6. recognize and identify major causes of current population growth/decline
7. describe the relationship of the past, present population growth, and the future size of population of the country
8. identify current cultural values of area, or nation, supporting large families, and those that may support small spaced families
9. relate current social issues; literacy, school attendance, role and right of women, employment, etc., to current population dynamics in Thailand
10. identify what would be the likely future impacts of population growth on the demand for resources and on the environment in Thailand

11. identify the importance of reducing the population growth rate in relation to improvements in food production

Suggested Learning Experiences or Activities

1. Define basic population and demographic terms which were listed in the content generalizations

- giving exercises to the students to practice calculation of some demographic problems relating to terms such as population density, birth rate, death rate, dependency ratio, growth rate, rate of immigration, rate of emigration, etc.
- panel discussion of urban, suburban, and rural life. This discussion should include all those aspects that relate to population and demographic terms such as family, environment, natural resources, etc.
- provide those activities that are concerned with using the given demographic terms, which may be a reading assignment and/or library research for the definitions of the demographic

2. Group discussion of basic values, cultural beliefs, or life styles of the Thai people in different regions would be assigned to the students to identify basic factors in social development or family life that would interact with population numbers. The characteristics of different regions of Thailand could be presented visually to indicate various ages, sexes, etc. This visual image could be demonstrated by magazine pictures or drawings, sorted and arranged to demonstrate the impact of numbers and interaction of characteristics which number in a cultural context.

3. The information concerning sources of demographic data, which include census, registration, immigration records, and incidental sources are presented and instructions about how to obtain population

data from the central and local government offices are provided to the students. The students would be assigned to gather demographic data for a given community from the available sources in that community.

4. Individuals and/or small groups are assigned to take a census of a small community, or the population of any given institution, by using minor measures: age-sex-height, etc., and construct simple graphs or charts to illustrate numerical/statistical concepts.

5. Library research for the history of census taking in Thailand, from the beginning until the present, is assigned to the student.

6. Draw a bar graph of the crude birth rate and crude death rate of Thailand in comparison with two nearby developing countries and one or more highly developed countries.

7. Give the size of population and the number of people who died in one year in a particular community in Thailand; calculate death rate of the population in that community.

8. Assign the student to calculate rate of natural increase from given birth rate and death rate of a population of Thailand for a given year.

9. Prepare a graphic or verbal description of the distribution of population of the four regions (North, Northeast, Central and South) of Thailand. Also, require the students to prepare an analysis of population by age and sex in those four regions.

10. Students are to study the population policies of Thailand in detail. This study should include the policies that were adopted from the beginning of the history of Thailand.

11. Compare the population policies of Singapore, Canada, Russia and the United Kingdom to Thai population policies. Identify the purposes and objectives of each policy with regard to type and size of families.

12. By using a population distribution map of Thailand for 1911, 1929, 1947, 1960, and 1980, graph the density of the population of the major provinces of each region.

13. Invite representatives from the different regions of the nation to present information on social issues, such as values and beliefs, education, employment and the current population dynamics in their region. This could be done by guest speakers, or through field trips to visit regional leaders in their communities.

14. Assign discussions on the relationship between ecology and environment with written reports on the discussion. These should be definitions of the terms ecology and environment.

15. Describe in writing the natural resources of Thailand, and give at least three reasons why man depends on those resources.

16. Describe in writing the important factors that pressure Thailand with regard to resources and environment.

17. Present systematic explanations by means of demonstrating and identifying these factors related to the impact of population on resources and the environment. The assessment of this population impact could be done by using a quantitative model which shows the

demand for resources and the pollution levels associated with different rates of economic and population growth.

18. Present overall aspects about food production of Thailand.

The presentation consisted of the following topics:

- major sources of food production of the Thai people (rice, fish, poultry and livestock)
- agricultural data of agricultural land, labor force in agriculture, rice production
- "Rice" the major food of Thai people
- data on area of rice production
- the correlation of rice production
- rate of population growth

19. If the rate of rice production decreases, or is constant, but the rate of population growth increases, there would be a shortage of food supply.

- assigned a problem on prediction of food production by using the number of the future projection of food production rate and population growth rate in the next ten years and the average consumption of rice per year. Require the students to calculate and to predict whether or not there would be food enough for the Thai population in the next ten years, by using the actual rate of population growth and the rate of rice production at the present.

AREA II. . HUMAN DEVELOPMENT AND THE FAMILY

Review the Area of Study

The family, as a basic unit of society, is made up of people from the former generation to perform the key function of childbearing and childrearing, as well as maintaining family members through meeting physical and social-emotional needs.

There are two types of families: (1) the nuclear family, which is usually made up of parents and children alone, and (2) the extended family, which consists of parents and first cousins of either husband or wife and their children. The individual personalities, attitudes and values are formed within the family. The extended family includes several individual families living in close association sharing property and relationship. This type of family seems to be the most widespread kinship grouping within Thai society.

Since the family is a social unit and is a part of the larger society, it would have responsibilities for social functions. The social functions that the family would share responsibility for are: economy, political order, and the social-educational-religious system of the society.¹⁶

¹⁶Home Economics and Social Programmes Service, Population, Family, Life and Resources: A Population Education Curriculum Guide (draft ed.: Rome, Italy: F A O, Via della Terme di Caracalla, 1974), pp. 54-55.

Setting the General Goals

The goals of presenting learning experiences in the area of human development and the family, are to develop basic understanding and attitudes about:

- (a) The processes of human development in relating to the resources of the social and physical environment
- (b) The impact of heredity and environment on an individual's behavior
- (c) The roles of a family in relating to its responsibility for social functions
- (d) The relationship between the size of the family and the family economic stability

Content Generalization

1. The foundation of every known society and its individuals is molded by fundamental rules, values, knowledge, skills by which individual behavior is directed.

2. The direction of the individual's goals is based on the values that the individual holds.

3. In the development process of the individual, a set of values is established that is an important factor in helping him make decisions for his life.

4. The behavior of the individual is influenced by his attitudes, values and interpretation of his environment that he has accumulated through his experiences.¹⁷

¹⁷Family Living Guide (Little Rock, Arkansas: State of Arkansas, Department of Education, Division of Vocational Education, 1968), p. 1.

5. The standard of living of the individual is affected by the relationship between the labor force and the availability of jobs. The economy of the family depends on job security of the family members. The family size has direct influence on its economic stability. In turn, the economic stability of a family influences the standard of living of the members of that family. Also, the size of one's family affects the way in which individual's needs are met.¹⁸

6. Marriage is the beginning of the expansion of the generation. It might be considered as a necessity for mankind in responding to the natural needs for love and sex. Marriage does not change basic personality traits of the individuals. There are many factors that contribute to success or failure in marriage; among those, education and economic security seem to have the most influence. Marriage forms vary with custom and tradition of the society to which the individual belongs. The engagement period serves as a time for the couple to establish empathy with each other and to make some decisions about their life together and the size of their family.¹⁹

7. The family process could be considered as a unity of interacting personalities. Each member of the family has his roles determined by obligation and responsibility, and the status of any family member has influence on the other family members and with the community.

¹⁸Mary T. Lane and Ralph E. Wileman, A Structure for Population Education (Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina, 1974), p. 13.

¹⁹Family Living Guide, p. 15.

8. The family process consists of communication, social status, position and role in society, and power and values that each family member holds.

9. In a democratic society the family is considered as a social unit that assumes the function of responsibility of the individual since he was in the womb, through his childhood. The family that consists of parents who have sensible and healthy minds would bring up a sound child because the child needs love and security in order to grow up as a well adjusted individual. It is necessary for the parents to instill good health habits and to encourage good behavior patterns in the child.²⁰

10. Even though there is a sequence that is generally characteristic in the physical, emotional, intellectual and social development of children, each child develops according to his own pattern and at his own rate. However, there are persistent trends in personality as a result of heredity, early experiences and recurring conditions in environments. Combinations of traits are different for each member in the family, since each child has a unique heredity pattern and will respond in different ways to his environment.

A child, brought up in an environment which is free from tension, and where expectation and discipline are consistent, is more likely to be a well adjusted, happy person. Therefore, the community has responsibilities for providing a desirable environment for children and for extending opportunities for education, recreation, and protection.²¹

²⁰Family Living Guide, p. 27. ²¹Family Living Guide, p. 27.

Instructional Objectives

At the end of this unit the students and participants can:

1. identify the factors that direct the individual's behavior to his goals and values that give meaning to his life
2. recognize the importance of individual's values which influence decision making in his family life
3. recognize that the individual's behavior is the result of attitude, values, interpretation of environment, and previous experiences
4. identify and recognize the factors that affect family size and the individual standard of living
5. describe verbally and in writing the relationship between the labor force, and jobs available
6. develop some understanding of the responsibilities for his/her married life and make right decisions on the size of the family
7. describe verbally or in writing, structure of the family unit in cultural context, its structure, size, functions and internal processes
8. identify the responsibilities of parenthood and recognize the individual's characteristics that are inherited and learned from his parents
9. understand and describe how a child develops physically, intellectually, socially, and identify the factors that contribute to this growth

10. determine the responsibilities of the parent for the care and guidance of the children, and reasonably explain why the continuous emotional growth of the child needs the constant intelligent guidance of the parents

11. describe how the community assures security for the children.

Suggested Learning Experiences of Activities

1. Define the following terms:
goal or objective, values, behavior, society, meaning of life
2. Assign small group discussions concerning how the following values are formed:
 - demonstrate or illustrate how the individual's values are affected by the nature and quality of family relationships with regard to size of the family, economy, and education
3. Assign the students to construct graphs depicting the labor force and jobs available in Thailand in 1960, 1976, and 1980.
4. The students are to list five causes of unemployment in Thailand from 1977 to 1978.
5. Describe the consequences for a family whose wage earner is laid off because of economic status of the company.
6. Construct a graph depicting average family income of Thai people in the past ten years.
7. Assign the student to list at least five factors on which he places the highest value, and form group discussions for each, and report the views of each group.

8. Provide panel discussions on the following topics:

- the appropriate time for starting family life
- the importance of preparation for marriage
- what should be the goals for family life and causes of success and failure in marriage

9. Assign small group discussion in order to identify the concepts of family process

10. Conduct role-playing on the issues of family life with group members assuming the roles of family members. This activity may offer illustrations of family processes in action.²²

11. Require the group to analyze their own group process. Each member, for example, would list his perceptions of his own, and other roles and contributions, to the group. Appropriate care must be taken to avoid personalities. These group views can be shared and discussed.²³

12. Group discussion and report on:

- function of the family in Thai society
- the implication of social regulation on family life and children
- how families grow and change
- what are the responsibilities of parenthood

13. Assign the students to conduct a community survey to identify agencies, educational facilities, recreation, health service, and

²²Home Economics and Social Programmes Service, Population, Family Life and Resources: A Population Education Curriculum Guide, p. 64.

²³Home Economics and Social Programmes Service, p. 64.

security assurance that contributed more to childhood development.

14. Assign each student, or group, to conduct library research on child development in different stages, which include both physical and emotional. Each individual, or group, would be assigned a different stage of child development and report the findings to the class.

AREA III . HUMAN REPRODUCTION AND FAMILY PLANNING

Review the Area of Study

It was the purpose of this area of study to present brief knowledge of human reproduction and physiology of the human reproductive system to students and participants. This knowledge would be used as a basis to understand human sexual behavior and some technology of birth control.

An attempt to reduce and control birth rate, in order to improve the quality of life and society, is considered a natural law of survival.

Sexual relations and reproduction, which are concerned with the relationship of male and female, are facts of nature. Sex and the reproductive function represent individual needs, energies and personality as well as social and cultural patterns. It is necessary for every individual to know and understand and to be able to recognize the problems that might occur in their lives with regard to sex and reproduction. Sexuality may be used to express feelings about oneself and feelings about relationships with others, as well as representing one's position or status in the society. On the other hand, in this broader social sense, sex and sexuality are not only what one does, but who and how one is.

During the development process of the individual, sexual feelings and attitudes are shaped in the early years, released through the

energies of maturation, and expressed within the cultural context. The family is considered as the major determinant of sexuality in action through example and teaching.

In society, the cultural expectations of sexual behavior and of expressions of sexuality by men and women direct family behavior in husband-wife and parent-child interaction. The impact of social change on family life can be expected to cause alterations in the sexual and reproductive practices of the family. It could be expected that the values which surround the children, and those of early child-bearing age, may change and new awareness and understanding of sex and sexuality may make male and female roles and activities more explicit in a cultural context.²⁴

Viewing knowledge of sex and reproduction as a necessity for the Thai people, some Thai educators suggested that this subject matter must be taught to children first by the family. In the school system this subject must not be included in the regular curriculum as a single subject. It must be integrated into other related subjects. The term "sex education" must be avoided by using other terms such as "family life." or "human life." At the time of this study population education had been accepted as the means to approach this subject in the school curriculum. Although there may be some educators who argued that population education was not concerned with sex education and it should be a separate category, the content

²⁴Home Economics and Social Programmes Service, Population, Family Life and Resources: A Population Education Curriculum Guide (draft ed. Rome, Italy: F A O, Via della Terme di Caracalla, 1974), pp. 54-55.

of population education and the philosophy underlying the subject were used to serve the purposes of the Thai population policy. Population education has been accepted as a means of population control, and family planning knowledge was included in almost every text in population education used in the school system of the country.

Setting the General Goals

The goals of studying about human reproduction and family planning are to develop positive attitudes and understandings of:

- (a) The knowledge of basic anatomy and physiology of human sex organs
- (b) The individual sexual development and sexual behavior
- (c) The process of human reproduction
- (d) The concepts of family planning

Content Generalization

1. All terms and vocabulary for anatomy and sexual activities are to be presented in a straightforward manner to the students in order to clarify the emotional impact of the nonscientific language and many other misunderstandings.²⁵

2. Male sex organs consist of external and internal parts. Male sex organs consist of the penis and scrotum. The penis is responsible

²⁵Elizabeth Mooney, The School's Responsibility for Sex Education (Bloomington, Indiana: Phi Delta Kappa Educational Foundation Publication No. 47, 1974), p. 27.

for ejection of semen and sperm into the opening of the female sex organ called the vagina. The scrotum is the pouch which contains internal sex organs called testes and their accessory organs.²⁶

3. Internal sex organs consist of two testes, two epididymis, two vas deferens, two seminal vesicles, one prostate gland and one urethra. These glands produce sperm and semen. The tubes are responsible for carrying the sperm and semen through the opening of the penis.²⁷

4. A sperm is a mature male sex cell, the specific output of the testes. It is the generative element of the semen which is a grayish white liquid produced by the seminal vesicles, the prostate, and the Cowper's glands.²⁸ In a normal person each ejaculation would release approximately 2.6 ml. of semen and each milliliter contains about 80 million to 120 million sperm.²⁹ Therefore, each ejaculation would release approximately 160 million to 240 million sperm.

5. The path of the sperm: the testes produce sperm which move to the epididymis to reach maturation and then move up into the vas deferens and through the ejaculatory tube into the urethra. The sperm, when mixed with ejaculatory fluid, become semen. At the peak of sexual

²⁶John P. Friel, Dorland's Illustrated Medical Dictionary (25th ed.; Philadelphia: W. B. Saunders Co., 1974).

²⁷Frank H. Netter, Reproductive System, Vol. II, The Ciba Collection of Medical Illustrations (New York: Colorpress, 1970, p. 21).

²⁸Friel, Dorland's Illustrated Medical Dictionary.

²⁹John D. Bauer, Philip G. Ackerman and Gelson Toro, Bray's Clinical Laboratory Method (7th ed.; St. Louis, Missouri: The C. V. Mosby Company, 1968), p. 87.

excitement the semen will be ejected passed through the urethra, through the opening of the penis.

6. Female sex organs consist of the external genitalia, that includes outer lips (Labia Majora), small lips (Labia Minor) clitoris, vaginal opening and urethra opening, and internal genitals, one cervix, one uterus, two ovaries, two fallopian tubes. These internal genitals are supported by the pelvic girdle.³⁰

7. There are two fallopian tubes which serve the function of carrying the egg to the uterus. Each month one ovary ripens an egg within a follicle. The fallopian tube will carry the ripend egg to the uterus to wait for fertilization.

8. Normally the young woman who reaches puberty age will have ovulation every month until she reaches menopause age, approximately between the ages of forty and fifty years. The menstrual cycle is a monthly pattern that begins at puberty and ends with menopause. This cycle prepares the female reproduction system for pregnancy. Menstruation is the slow flow of blood out of the uterus through the vagina. Every month a new lining grows in the uterus, this lining breaks down and flows out of the uterus if conception has not taken place. Menstruation occurs about every twenty-eight days and lasts about five days.

9. Fertilization of the human ovum normally occurs in the lateral portion of the oviduct. Sometimes in rare instances it may take place elsewhere in the genital tract or even in the ovary.

³⁰Netter, pp. 89-95.

Soon after the spermatozoan enters the ovum, the male and female pronuclei to form the segmentation nucleus, which rapidly divides and redivides and finally becomes the embryo which is called pregnancy.³¹

10. Pregnancy is the condition of having a developing embryo or fetus in the body, after union of an ovary and spermatozoan.³²

11. Pregnancy, childbirth, and child dependency are natural events in human life.

In woman, the duration of pregnancy is about 266 days. Pregnancy may show signs of cessation of the menses, nausea or vomiting in the morning (morning sickness), enlargement of the breasts, and pigmentation of the nipples, and progressive enlargement of the abdomen.³³ The absolute signs of pregnancy are fetal movements and sound of the fetal heart. The movement of a normal fetus starts at the tenth to eleventh week of gestation.³⁴

12. Individual physiological maturation develops sooner than emotional maturation.

³¹Netter, p. 217.

³²Fried, Dorland's Illustrated Medical Dictionary.

³³Friel, Dorland's Illustrated Medical Dictionary.

³⁴Robert C. Goodlin, Care of the Fetus (New York: Masson Publishing, Inc., 1979), p. 3.

13. Human sexual behavior is the way men and women act and how they perceive people should act in social, emotional, and physical relationships.³⁵

14. The interrelationship of men and women under cultural and social pressures may influence individual sexual behavior from infancy to adulthood.

15. (a) Family planning is the planning and spacing by a couple. The contraceptive methods which enable a couple to plan and space pregnancies also enables the couple to limit the size of their family as they wish.
- (b) Family planning is to limit family size by making a determination to have children according to the ability to provide the best care for them at the present and in the future.
- (c) The widespread practice of family planning will facilitate the reduction of rapid population growth.

Instructional Objectives

At the end of this unit the students and participants can:

1. define verbally and in writing human sexual organs of both males and females
2. describe the anatomy and physiology of human sexual organs of both males and females

³⁵Mary T. Lane and Ralph E. Wileman, A Structure for Population Education (Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina, 1974), p. 13.

3. recognize the developmental change in his or her sexual organs
4. understand and describe in writing or verbally the development of menstruation and its cycle
5. understand and be able to answer questions relating to basic knowledge of human reproduction and family planning.

Suggested Learning Experiences or Activities

1. Present all terms and vocabulary for anatomy and human sexual activity to the class in a straightforward manner in order to clarify the emotional impact of the nonscientific language and cultural differences in terminology as being secondary to understanding.³⁶

- give several terms and vocabulary that are included in the human reproductive system and sexuality course and assign the students to define them in writing and or as a library research report.

2. Present the class with genuine concern about sexual health within the content of total human sexuality and response. The appropriate material would be presented to the class, and a more realistic, less frightening, approach would be used. Venereal diseases are still a serious problem in Thailand. They should be taught as such in most existing health education programs.³⁷

- small group discussions on contemporary sexual health problems in Thai society
- write a report on existing venereal disease in Thai society

³⁶Mooney, The School's Responsibility for Sex Education, p. 27.

³⁷Mooney, p. 28.

3. Assign individuals and small groups to describe in writing the process of human reproduction.

4. Present pictures of human development in the reproductive system from fetus through adulthood, and let the students describe the change in sex organs of both sexes during the process of human development and write individual reports.

5. The students are to describe in writing the signs of pregnancy and the process of childbirth.

- Describe external body changes and emotional experiences of the mother in these stages of pregnancy:

- a. prenatal (conception to labor)
- b. labor (delivery)
- c. post natal (adaptation and recovery)³⁸

6. In your own words define when human life begins.³⁹

7. Assign the students to compare the following:

- a. physical maturation of male and female
- b. emotional maturation of male and female
- c. write a report on the above findings

8. The students are to define the term "sexual behavior" and describe physical and emotional consequences of sexual intercourse that could be either desirable or undesirable.⁴⁰

³⁸Lane and Wileman, A Structure for Population Education, p. 34.

³⁹Lane and Wileman, p. 35.

⁴⁰Lane and Wileman, p. 36.

9. The students are to:
 - define the terms menarch and menstruation
 - describe visually or verbally the menstruation cycle⁴¹
10. The students are to:
 - describe the function of the endocrine glands and their hormones in sexual development from prenatal life to maturity
 - describe how body differences have influenced sex roles historically and currently
 - given current sex role stereotypes, classify them as acceptable or not acceptable to you. The criteria for classifying should also be articulated.⁴²
11. (a) Present information about family planning, including meaning, purpose and contraceptive methods
- (b) Ask the students to select the most appropriate contraceptive method for the Thai culture and give the reasons: both positive and negative views.
- (c) The students are to:
 - describe three to six techniques of birth control that have been used in the past
 - describe three to six contemporary techniques of birth control used in Thailand
 - list two purposes of the premarital medical examination
 - graph the statistics on childbirth, infant mortality, and the age of the mother in a given situation

⁴¹Lane and Wileman, p. 35.

⁴²Lane and Wileman, p. 37.

- describe the relationships among these factors: the age of their mother during pregnancy, the number of her pregnancies, and the dangers to her and her potential offspring.⁴³

12. Provide information concerning population policy in Thailand.

Present to the class the meaning of population control and the role of family planning. The student would be assigned to:

- name and describe the means for population control in Thailand in the past
- compare the population growth rate of Thailand before the time of a family planning program as a nationwide policy, with the population growth rate five years after the program started.

⁴³ Lane and Wileman, A Structure for Population Education, p. 37.

AREA IV. FAMILY MANAGEMENT PROCESS

Review the Area of Study

The family as a social unit consists of individuals who are the family members. The influence of environment helps to mold the lives of individuals and their family. Therefore, the family, in its patterns of daily life, responds to the impact of the social environment in terms of the values and goals that the family holds. Decisions and choices relating to management of the family and the use of resources are also influenced by the values the family holds. To understand the dynamic quality of the family and the process of seeking options or alternatives to achieve the family goals, one must understand the management function in use of resources that serve to support the quality of life.⁴⁴

It is obvious that the values, goals and environment determine the criteria for the expenditure of individual and family resources. However, during situations when faced with severely limited resources because of rapidly increasing consumption due to rapid increases of world population, education by itself would not effectively solve the problem. The solution to the problem must be sought through a greater share of resources and social justice.⁴⁵

⁴⁴Home Economics and Social Programmes Service, Population, Family Life and Resources: A Population Education Curriculum Guide (draft ed.; Rome, Italy: F A O, Via della Terme di Caracalla, 1974), p. 93.

⁴⁵Home Economics and Social Programmes Service. p. 93.

Setting the General Goals

It was the purpose of this area of study:

- (a) to provide basic understanding of the process of management and decision-making at the family level
- (b) to provide knowledge of how environmental factors and resources affect family economy and quality of life in relation to family size
- (c) to provide a basic introduction to possible alternatives in family goals, as related to family size and resources and social development⁴⁶
- (d) to suggest the roles of the members of the family in planning family life together.

Content Generalizations

1. The family economy affects, and is affected by, the larger economy and changes in the family life cycle, which results in changes in the demands and upon resources as well as in the kind and quality of resources available.⁴⁷

2. Understanding of goals, values and resources is necessary for making decisions.

3. The management process is concerned with planning a course of action to reach goals, including the following steps: setting goals and objectives, making a plan, taking action, and evaluating the results.

⁴⁶Home Economics and Social Programmes Service, p. 93.

⁴⁷Family Living Guide (Little Rock, Arkansas: State of Arkansas, Department of Education, Division of Vocational Education, 1968), p. 37.

4. Decision-making is a mental process. It is based on past experience and it will be reflected in each step of the management process. It involves: defining clear goals and setting more specific objectives for the purpose of evaluation, and preparing and considering alternatives to achieve these goals.

5. New knowledge rather than relying only on past experience or intuition is also necessary in making informed decisions.

6. Values are those qualities that individuals, families, and the total culture believe to be important in life.

7. The values vary according to the situation. Therefore, decisions reflect the values of the family within a cultured context.

8. There are several factors that influence individual values such as: peers, society, family group, age, education and religion.

9. To accomplish the goals of family management, it is necessary to set the level of achievement and select priorities. Goals may be set as short-run or long-run, which vary according to their importance to the family.

10. Time is a limited resource that is important to the decision-making process. To reach each level of achievement of the family goals, time must be used wisely.

11. To make decision-making more specific the members of the family must understand the strategies required to achieve family goals. This may clearly require temporary submission of conflicting personal values in relating to their values.

12. The number of members in the family has a strong impact on resources, human and non human, within the family unit.

13. The management process cannot be applied to all cultures or among all groups, because of the differences in knowledge and tradition, in regard to reproductive decisions, family planning and space for children.

14. The values of the children may not be a conscious consideration in decision making for some families, but accepted as a natural outcome of family life.

15. It is obvious that reproductive decisions affect, and are affected by, the social-economic, cultural conditions that the family has experienced.

16. To accept new knowledge, and to prepare resources for the planning and spacing of children, helps to provide the family with an option or decision-making opportunity.

17. In situations where resources are limited to the point of deprivation for the family, management skills alone cannot provide options or choices. Other social, and economic factors, such as an increase in family income, must be considered first.⁴⁸

Instructional Objectives

At the end of this unit, the students and participants can:

1. identify some environmental factors which affect family economy

⁴⁸Home Economics and Social Programmes Service, p. 100.

2. identify basic values present in family and community life (within the cultural context).
3. identify and possibly set steps in a decision-making process for themselves and their family
4. relate specific family resources to family needs as that influenced by family size.

Suggested Learning Experiences or Activities

1. Present information concerning technological factors influence the family. This presentation could be made by a guest speaker representing an industrial or business organization in the community.
2. The students are to:
 - define the words "need" and "want"
 - compare two different families in regard to occupation, age of family members, size of the family, interest and level of education of each member; then write a report of the comparison
 - compare the standard of living of Thai families in a given period of time (1930, 1960, and 1980)
 - compare the standard of living in Thailand with India and the U. S. A.
3. Give an assignment to students in order to help them determine how to use time more effectively, by getting them to do motion studies on a given situation, analyze the nature of the assignment and see if the student could improve his skills and shorten the time.

4. In order to help the student develop more knowledge and efficient and sound practices in managing finances, the following activities are assigned to the students:

- use role playing to dramatize about a newly married couple; discuss their plan to meet the cost of their first child; pros and cons of the wife working, and family planning
- assign small group discussion on a given realistic financial problem and ask the group to report their suggestions to solve the problem.

5. In order to gain knowledge about sources of family income, the students are to be assigned to read and discuss information relating to income, money and other resources.

6. To develop understanding of the way family spending affects the total economy of the society, the teacher should invite a successful business man or economist to be guest speaker on economics, factors affecting the cost of living and the family's role in the nation's economy.

7. To help the student to recognize the factors which affect the family standard of living and security the following assignment must be done:

- (a) group discussion to determine and define what is meant by level and standard of living.
- (b) group discussion on the meaning of family values and goals and how they relate to standard of living. The size of family would be one of those factors.

8. The following assignments are to determine the ways that individuals' goals and values influence decision making:

- group discussion on the importance of decision making to individuals and the family
- identify the areas in which the individuals must make decisions, and use role playing to show how different goals affect the individuals' decisions.

9. Assign the student to describe in writing the difference between the management process and the decision making process, and the relationship between these two processes.

10. Give real or selected decision-making situations for a divided small group of the students in the class (different situation for each group) to lay out the plans to make decisions on the given situation step-by-step; the groups must report their plans to the class.

AREA V: RESOURCES AND THE ENVIRONMENT

Review the Area of Study

Population structure and its growth trends have a close relationship with the social structure of the nation, both rural and urban. As to the question, what would be the optimum population for a nation, it is difficult to give a direct answer. However, it could be stated that the optimum population of any nation is the number which, when combined with available resources in society together with technology, would yield the highest per capita production and promote human welfare.⁴⁸

Rapid population growth of the nation would lead to problems of shortages of natural resources and environmental problems, because rapid increase in number of the population would increase the rate of industrial development which will quickly utilize raw materials and natural resources of the nation. The more industrial development occurs, especially in urban areas, the more environmental problems would follow. More chemical wastes would be drained into rivers and canals, which are sources of water supply for agriculture and consumption. More toxic fumes would cause air pollution. These problems had occurred in Thailand, especially in big cities like Bangkok. It is important to the Thai people to be aware of the problems and to seek the best solution.

⁴⁸ Radom Setteeton, "The Problem of Population Growth in Thailand: With Emphasis on Food Production and Family Planning" (unpublished doctoral dissertation, Michigan State University, 1967), pp. 97.

The future impact of population growth on the demand for resources and on the environment in Thailand is not too far from a crisis. As a matter of fact, major environmental problems, such as air and water pollution in urban and suburban communities, are being faced. The shortage of natural resources could soon become real.

Since Thailand depends on natural resources and agriculture as the foundation of social and economic development, the rapid increase of the Thai population would have direct effects on agriculture and the utilization of natural resources.

Setting the General Goals

The goal of providing information on resources and the environment is to help students to develop understanding, awareness and attitudes about:

- (a) The future impacts of population growth on the demand for resources and on the environment in Thailand
- (b) How the rapid population growth affected the demand for resources and the deterioration of the environment
- (c) How man can live in harmony within the environment without destroying it.

Content Generalizations

1. Population growth enlarges the magnitude of the social and environmental problems and also makes them more complicated, thus tending to make solutions more difficult.⁴⁹

⁴⁹Setteeton, p. 108.

2. Population has a direct relationship to the natural resources.
3. The natural resources are limited by the excess amount of pollution.
4. Population size and distribution of population may decrease environmental problems.
5. Modern society may be classified into three categories.
 - a. Society founded on natural resources and agriculture
 - b. Society founded on new research and technology
 - c. Society founded on the proper organization of high technology, high productivity and appropriate control of the use of technology in the organization of the society.
6. Thailand is an agricultural country enriched by natural resources for agriculture.
7. Increasing population of the nation directly affects the use of the land due to the needs for food and shelter.
8. Due to lack of technological knowledge to increase agricultural production and lack of good control of use of natural resources, any increased production in agriculture must be achieved by increasing the agricultural areas.
9. To increase agricultural areas would decrease forestry areas, one of the major national resources of Thailand.
10. The more increase in urban population, the more need to extend suburban areas, which would slowly decrease the agricultural areas.

11. Although the government adopted population policies to decrease the population growth rate from 2.5 to 2.1 percent within the last year of the national development policy, the effects of population growth on agriculture and forestry are still crucial.

12. In order to cope with the future impact of population growth on agriculture and resources, it is necessary to make long term projections for the development plans.

13. Use of population projections for long term planning in controlling environment and natural resources is necessary.

14. Population growth increases the social responsibilities in a society such as economics, health education, and welfare.

15. At the present, health problems in Thailand are becoming more intense because of inadequacy of medical personnel and medical supplies.

16. Thailand has a high population, but still lacks skilled persons because of the failure of the educational system to produce enough manpower at different levels of education.

17. Rapid population growth causes rapid growth of industry, which causes rapid use of raw materials and natural resources.

18. Waste products from industries cause pollutions, such as toxic fumes, air pollution, and water pollution.

19. It was generally believed that to decrease the size of the population in the community, and to alter the distribution of the population would be one effective method to save natural resources and protect the environment.

Instructional Objectives

At the end of this unit the students and participants can:

1. recognize the characteristics of societies founded on agriculture, technology, high technology and good organization
2. understand and be aware of the future impact of population on resources
3. develop positive attitudes in utilizing natural resources wisely; appreciate a clean environment
4. understand that the environment is always changing, although during the course of a human life, one may not notice such change
5. recognize the environmental factors that might affect one or more phases of physiological activities that control life
6. understand environmental systems including hydrochloric cycle, carbon cycle, nitrogen cycle, and mineral cycle.
7. plan and make projections of consumption of natural resources by using population projection statistics
8. determine what would be the most appropriate for the individual and the family which would lead to decision making to select energy sources for the community
9. understand patterns of food consumption, and explore new resources to improve food production
10. realize that man sometimes becomes dominant over the environment, resulting in destruction of the natural equilibrium between plants and animals.⁵⁰

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Mary T. Lane and Ralph E. Wileman, A Structure for Population Education (Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina, 1974), p. 44.

6. Divide the students in groups and have each group survey the environmentally related problems in the community. Report those problems to the class. Have each group discuss solutions to the problems according to the following process:

- a. determine the nature of each problem (Problem analysis)
- b. make plans, step-by-step, and describe the plan for solution in each step logically
- c. if there are any obstacles discovered in the plan process, explain the strategies to overcome them.

7. Assuming that the environment has more influence on man than the influence of his heredity, let the students discuss environmental problems that relate to our living, following these topics:

- man as a living thing is part of the environment
- rapid population growth
- economic and social development
- natural disasters

8. Have the students present to the class the importance of "water consumption." What will happen to human population if man does not stop polluting the water.

9. Have students discuss in the class the relationship of man, plants, and water. How do they relate to each other? Could the relationship be broken down, and how could this be prevented?

10. Assign the student to design printed materials that contain information about environmental protection and conserving natural resources, in order to persuade the community to understand their importance.

11. Realize that every individual in the society is responsible for environmental protection and resources.

Suggested Learning Experiences or Activities

1. Have student give the characteristics of

- a. Agricultural societies
- b. Technological societies
- c. Full development technical societies

2. Have students estimate the average consumption of rice, vegetables, and meat in a family of six people for a month, then make a chart of amount of each type of food this family consumes using bar graphs and display them in the school. Which kind of food is the most favored by most families?

3. Describe contrasting environmental conditions at work between a taxi driver and a teacher. What are the similar conditions, and what are the differences? Do they have similar personalities?

4. Have students list the natural resources in Thailand that are necessary for daily life of the Thai people?

5. There are three types of natural resources

- a. inexhaustible natural resources
- b. replaceable and maintainable resources
- c. irreplaceable resources

Have students do some library research and describe in the report in detail the characteristics of each type of resource. What are the differences and how may we use them wisely?

11. For students and other concerned teachers, films would be shown concentrating on ecological problems of population growth; by adopting films from other countries that have similar situations to Thailand and through discussions following the film showing.

12. Invite specialists in the fields of environmental health, ecology, environmental protection, and industrial development to hold panel discussions on such topics as "The importance of resources and environment to population." "What is the impact of rapid population growth on resources and environment?"

Final Note For the User of This Curriculum Guide

There was no attempt to provide the curriculum content in detail. The goals and content generalization provided in the curriculum guide are presented as the framework. The user must expand the ideas or instruction to suit the needs of the students at an appropriate level. There are no suggestions for the amount of time to be allocated to each area of study because the application of the curriculum content depends on the flexibility and the availability of time in the total curriculum of each school. It is expected that the teacher would be resourceful in locating appropriate reference materials and modifying teaching techniques to provide effective teaching.

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A Suggested Bibliography of Materials Concerning Population
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APPENDIX C

PANEL OF EXPERTS

Panel of Experts

Dr. Boonlert Leoprapai
Director Institute for Population and Social Research
Mahidol University, Bangkok, Thailand

Mrs. Annie Ray Moore
Retired-previously with World Health Organization

Dr. Chaiwat Panjaphongse
The Planned Parenthood Association of Thailand (PPAT)
Under the Patronage of H. R. H. Princess Mother
(Former: Director of Population Education Project Mahidol University,
Bangkok, Thailand)

Professor Wallee Prasart-Tong-Osodh
Former: Chief Division of Textbook and Curriculum Development
Department of Academy Ministry of Education
Bangkok, Thailand

Dr. Suchart Prasithrathsin
Head, Department of Social Sciences
Faculty of Social Sciences and Humanities
Mahidol University, Bangkok, Thailand

Dr. E. R. Ram
Miraj Medical Center
Miraj Maharashtra, India

Dr. O. J. Sikes
Chief of Population Education and Communication Section
United Nations Fund For Population Activities
New York, U.S.A.

Dr. Marian Smallegan
School of Nursing
The University of North Carolina at Chapel Hill, North Carolina

Dr. Tae K. Sohn
Kon-Kuk University, Seoul, Korea

Dr. Prapapen Suwan
Assistant Professor
Dept. of Health Education
Faculty of Public Health
Mahidol University, Bangkok, Thailand

Dr. Narong Tiensong
Assistant Professor
Faculty of Social Sciences and Humanities
Mahidol University, Bangkok, Thailand
(A Member of the Committee of Population Education Administration
Ministry of Education and Former Asst. Director of Population
Education Project Mahidol University)

Professor Teodora V. Tiglao
University of The Philippines, Manila, Philippines
(Former: Education and Training Specialist, International Bank
for Reconstruction and Development, World Bank, U. S. A.)

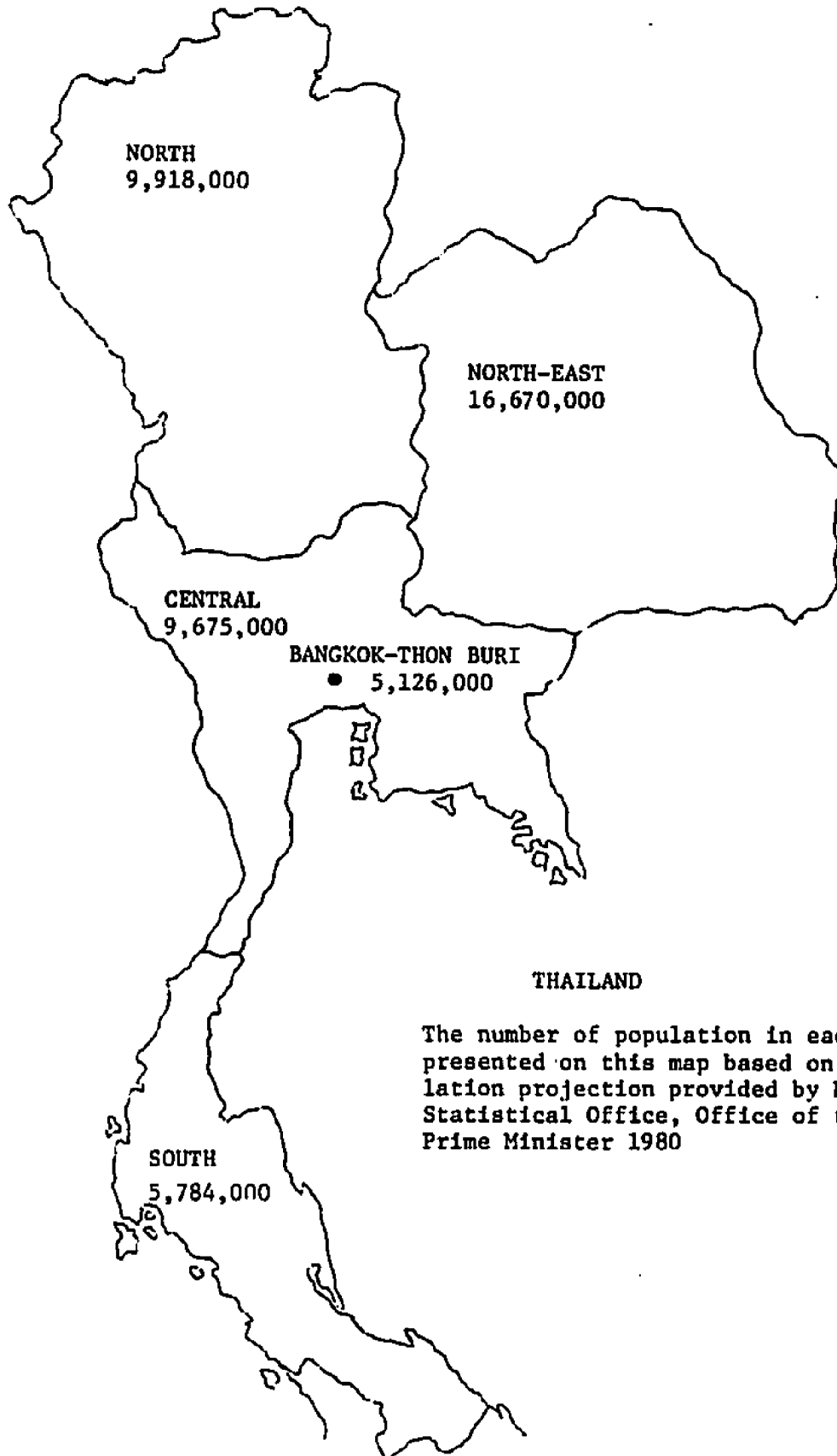
Dr. Stephen Viedman
United Nations Fund for Population Activities
New York, U. S. A.

Dr. Kowit Vorapipatana
Academic Department
Ministry of Education, Bangkok, Thailand
(Former: Director of the Adult Education Division of the
Department of Elementary and Adult Education in the Thailand
Ministry of Education and Director of Functional Literacy and
Family Life Planning Program)

Professor Songsri Wanasena
Chief of Population Education Division
Department of Curriculum Development, Ministry of Education
Bangkok, Thailand

APPENDIX D
MAP OF THAILAND

Total Population by Regions 1980-1981



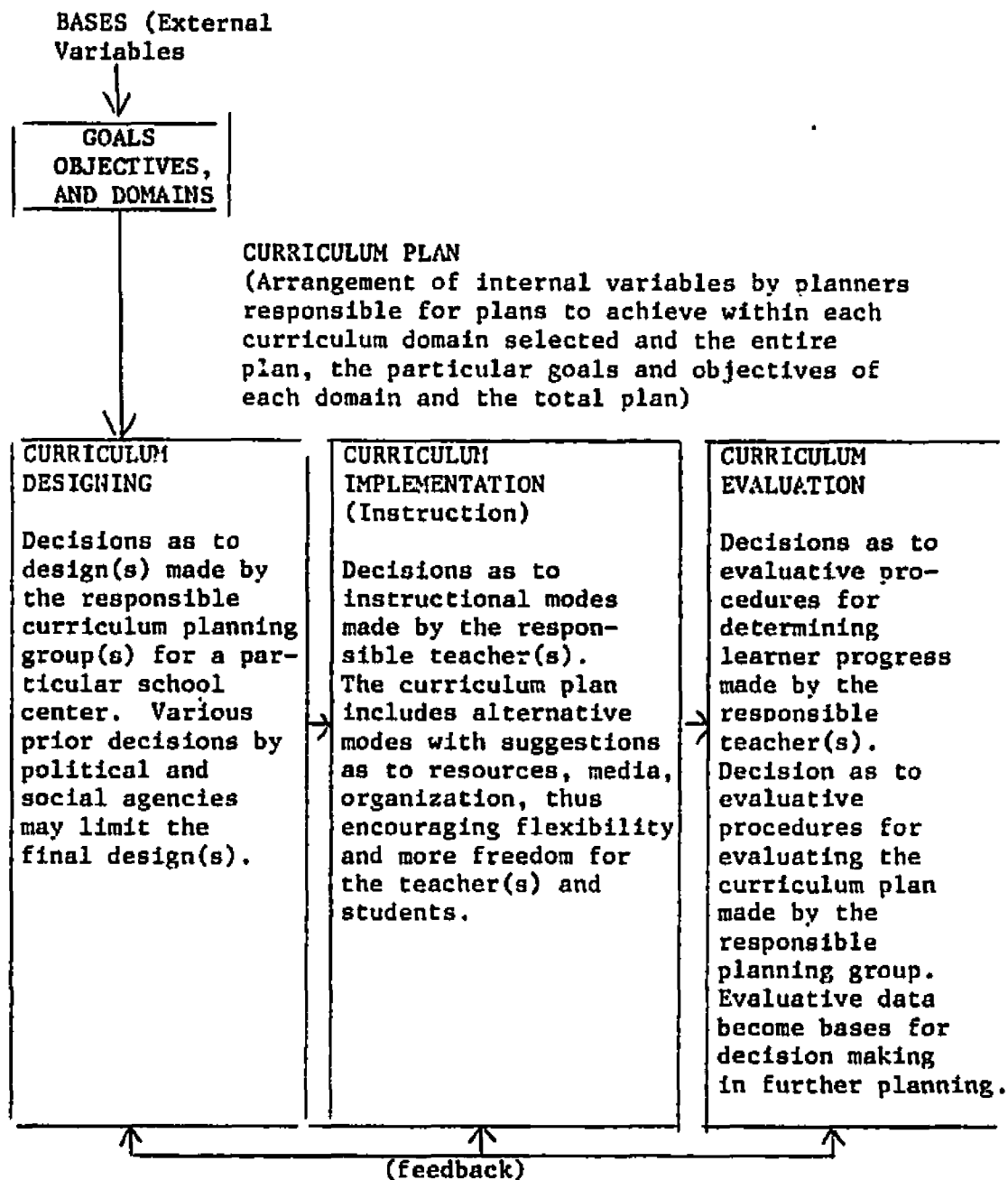
THAILAND

The number of population in each region presented on this map based on population projection provided by National Statistical Office, Office of the Prime Minister 1980

APPENDIX E

CURRICULUM PLANNING PROCESS

CURRICULUM PLANNING PROCESS



Source: J. Galen Saylor and William M. Alexander, Planning Curriculum for Schools (New York: Rinehart and Winston, Inc., 1975), p. 27.

APPENDIX F

**LETTER TO POPULATION SPECIALISTS
FOR OPINIONNAIRE RESPONSES**

East Tennessee State University

Department of Supervision and Administration • Box 19000A • Johnson City, Tennessee 37614 • (615) 929-4415, 4430

Dear

Since I have selected you as a specialist for my study, my doctoral committee would like to ask your help to examine the structure of the curriculum guide which consists of six parts in each area of the curriculum as follows: (Pag. 5; 7 to Pg. 5; 51).

1. The Areas of the Study
2. The General Goals
3. The Concepts
4. Content Generalizations
5. Instructional Objectives
6. Instructional Experiences and Learning Exercises

This curriculum guide is designed for student grade 11 and 12 and lower level student teacher (2 years after grade 12) in school system of Thailand.

Your kindness and your assistance would be most appreciated and most important to the successfulness of my study. Please return in enclosed envelope or to Cocke County Memorial Hospital. ATTN: Laboratory.

Sincerely,

Manit Subhakul
Doctoral Student
East Tennessee State University
Johnson City, Tennessee

William Evernden, Ed.D., Dissertation Chairman
Professor of Education
East Tennessee State University

Enclosure (Interview Guide From Original Study)
(Comments and Suggestions Forms)

APPENDIX G

OPINIONNAIRE .

OPINIONNAIRE

Name _____ Date _____

Position _____

Organization _____

1. (Q) According to your knowledge, what is the present status of population education and family planning programs both in and outside the school system of Thailand?

(A)

2. (Q) What should be the objectives of population education programs for the secondary school teacher who would participate in teaching population education in the Thai school system?

(A)

3. (Q) What educational prerequisites and/or experiences were recommended?

(A)

4. (Q) What professional preparation is necessary for teachers to be able to implement and direct population education in Thailand?

(A)

5. (Q) What specific courses, experiences, and competencies should be included in the curriculum? How should these be organized?

(A)

6. (Q) How best might these experiences be organized?

(A)

7. (Q) What about field work as part of preparation?

(A)

8. (Q) What should be the expected roles for graduates within
the schools and community?

(A)

9. (Q) What administrative skill should be included in the curriculum?

(A)

10. (Q) How should the effectiveness of the teacher graduated from the programs be evaluated:

(A)

Optional Question:

How should the study of abortion be handled in the population education program in Thailand?

(A)

Recommendations and Suggestions for Change

APPENDIX H

PANELISTS' RESPONSES TO THE SIX SUB-PROBLEMS

Panelists' Responses to the Six Sub-problems

- I. What should be the objectives of population education programs for the secondary school teacher who would participate in teaching population education in the Thai school system?
 1. The objectives of the curriculum should provide the prospective population teacher understanding of population problems and solutions to the problems. Family planning and birth control must be included.
 2. To prepare the prospective population teacher to understand the rapid population growth condition and its problems. They should have a role in prevention and solution of problems of rapid population growth. Provide them with the skills and competencies for entering the profession.
 3. The objectives of population education must be compatible with the national population policy. It must provide the prospective population teachers knowledge of the implications of population growth on social and economic development. The prospective population teacher should also be aware of other population problems, including how to prevent them and how to solve them.
 4. To prepare them to realize how the growth of the population worsens the Thai socio-economics and quality of life of the population. Attitudinal behavior should be changed to fit the environment and national resources. Experiences to approach all population matters to change the students they are going to instruct must be excellent.
 5. To create an awareness among the teachers about the need for population education and sex education in schools. To equip the teachers with knowledge and materials to teach sex and population education from primary school to high school.
 6. I think these objectives need to be determined by the Thais. Objectives could vary from understanding population concepts to understanding the population situation, to preparation

to integrate specific population concepts into the teaching each student does after graduation, to commitment to reducing the growth rate and ability to teach for achieving such reduction. I do not think an outside person is the one to determine which of these objectives are desirable within a country.

7. To these objectives, I think, the population education curriculum for teachers should be designed to understand the overall conceptual framework of the population education that involves the understanding of correlations and interdependence of natural environment and human existence such as: in Thailand, it may be,
 - a) population versus better living,
 - b) population versus more education,
 - c) population versus better health,
 - d) population versus better family,
 - e) population versus better neighborhood, community and nation, and
 - f) population versus better service to religion, and considerable variables which mean something to the learner for their motivations.

8. It seems to me that these would be similar to other countries, as
 - a) to help teachers understand population trends in the country
 - b) to help teachers be aware of and appreciate culture patterns, especially family practices
 - c) to help teachers become knowledgeable about the country's family planning program and population education program and activities and to have specific knowledge of how these operate in one or more communities, and to help teachers learn the importance of family planning for themselves (those who are married) as adult citizens and become informed about the services available
 - d) to help teachers learn what children should know and understand regarding population education at the different growth levels
 - e) to help teachers acquire skills and learn methods necessary for teaching population education according to the teacher's assignment; be that an integrated approach or special classes.

9. Objectives should aim to equip future school teachers with adequate knowledge of population dynamics and relationship between population trends and other factors. The most important of all is how to transfer such knowledge to school children in a simple and understandable language.

10. The objectives of population education curriculum for Thai teaching are as follows:
 - Develop right attitude towards population education
 - Help prospective teachers to understand the principle and the ideas of the framework of population education both in and out of the school system
 - Provide the knowledge and skills in teacher population education that would enable them to apply the knowledge and skills in the classroom

 11. The objective of a population education curriculum for Thai educational system should be stated by Thai only. It would not be appropriate for non Thai to answer this question.

 12. To help the student to understand how the broad concepts and principles of population education relates to other subject areas such as economy, environmental health, nutrition, etc. The major teaching approach should be problem solving process.

 13. Provide knowledge, understanding and meaning of population education. The students need to know and understand goals and objectives of population education policy both national and international. Create positive attitude towards population education. Provide skill to the teacher to be able to transfer population knowledge to the other efficiently.
- II. What educational prerequisites and/or experiences were recommended?
1. There should not be any prerequisites; the population education program should be arranged to fit any group of learners.
 2. Population education should be a required course; no prerequisites are recommended.
 3. The population education program is part of teacher education and requires no prerequisites other than those for teacher education.
 4. Population education programs should be designed to cope with any age group and knowledge level of the learner. There should not be any prerequisites.
 5. There should not be any prerequisites and/or experiences for teachers with respect to population education because population education is related to all other components of curricula directly or indirectly in the formal education system.

6. The participants should be active teachers who have experiences in teaching regardless of the type of certification or degree possessed.
7. The participant should have minimum knowledge, an associate degree in education and general knowledge in statistics plus a year experience in teaching.
8. The prerequisites should include knowledge of method of teaching, problem solving, planning, and decision making processes and teaching experiences.
9. The teacher who possesses a degree in social science would be adequate.
10. The population education teacher should possess qualifications the same as other teachers. The population education needed will depend on what level is to be taught and whether as a separate course, or infused into other courses, etc.
11. More or less the same for any other field plus special emphasis of population aspects for those who will have a special responsibilities standards should be equally high or higher. It seems to me that all teachers will automatically enter the population education program since all teach children who are growing and developing. Therefore, all need some grounding in accordance with the country's programs and expectations for its citizens.
12. Experiences should include knowledge in sociology, health education, nutrition, and statistics, etc., and also those who experience in teaching process based on problem solving method.

III. What should be the expected roles for graduates within the school and community?

1. The population teacher should be the leader in population education both in school and community by being cooperative and participating in population activities in the community. He would be the resource person for population education. He would help other teachers to integrate population education into other regular courses. He also would help in initiating special activities in population education for all students in the school.

2. The population teacher would be teaching in public school the same as other teachers and also he must be a resource person in population education for the other faculties within the school. The population teacher must provide help in any population activity in school and community and also write population information for the local newspaper.
3. The teacher who graduates from the program would have a role as a population education coordinator, he would be working with a family planning team in the provincial area. As a coordinator of the family planning team he would be teaching and demonstrating information concerning population education.
4. The philosophy and basic principal role of the population education teacher is to give academic training in population education to the individuals both in school and in the community. Practically, if these population teachers do not receive proper training directly or are put into a position that is not directly concerned with population activities it would be only a waste.
5. The population education teacher would have the following roles:
 - As a transformer of knowledge
 - As a change agent
 - As a propagator of socially desirable norms and attitudes
6. As the population educator the population teacher must have the role of leader in the community and show a good pattern of behavior.
7. The role of the graduate will depend upon a number of things, as
 - a) The type of work assigned to undergraduates
 - b) The need for supervisors, coordinators, program planners, administrators, professional teachers
 - c) Community workers required at that level of work, etc.
8. Graduates should take leadership roles in the school and community. They should take an active part in community organizations and provide linkage between what is taught in the school and community activities.
9. They should be practitioners of family planning in the community and well versed to teach any class from primary to high school on population and demography.

10. I think there are two distinct role alternatives:
 - a) Teacher in the public schools - main role to integrate population concepts into regular classroom teaching; to a limited extent, the teacher would try to influence the school and other teachers to also teach population concepts.
 - b) Alternatively, there are leadership roles: administer a program, or help teachers integrate population concepts via special training or through encouraging the educational system (school, grade, district) to develop such teaching.
 11. In the formal school system, he or she may be in charge of population education in relation to his or her primary teaching role and functions. This teacher can be related to the community population education in the non-formal educational system such as community development, agriculture extension, religions education, welfare work, youth activities, women's associations, or senior citizens' organizations, etc. The educational program should be coordinated and related between the involved agents.
 12. It was felt that upon completion of training program the secondary school teacher must be able to teach and transfer population education knowledge to the others. They must act as a leader in the community; demonstrate the way to improve quality of their lives and others.
- IV. What specific courses, experiences and competencies should be included in the curriculum? How should this be organized?
1. There should be basic knowledge of demography and population problems, which includes population policy and the solutions to the problems; also the knowledge of preparing teaching materials.
 2. The content and learning experiences should cover the areas of basic demography, population statistics, family planning, methods of evaluation, instructional material preparation and other general educational courses.
 3. The curriculum content should provide a variety of courses dealing with causes and effects of population change and rapid population growth, family life cycles and family decision making processes.

4. Areas that I think need special training are:
- a. Population concepts (relation of population to reproduction, family life, economy, environment, policies and the future need to be included)
 - b. Strategies for change (the present educational system rarely includes population education)
 - c. Teaching methods (traditional teaching methods-reading, lecture are not adequate to teaching; a change in behavior is a desired outcome, I think it usually is in population education)

Also useful: Materials development
If the person is to "direct" population education, administration, training skills, and evaluation skills are also needed.
5. The content and learning experiences must consist of the following areas: sex education, birth control, reproductive systems, and mortality, health evaluation, psycho-social, economic and other factors affecting acceptance of family planning method, integrations of family planning with other services.
6. Population education: population concepts, strategies for change, and teaching methods that involve interaction among students and between students and faculty.
Materials development
Administration If the intended role is more than the
Evaluation role of a teacher but also an admin-
Training istrator/leader
7. In general, I should include issues and problems relative to population and the implications of uncontrolled population on economic, socio-political, health and education development, human reproductive biology and various approaches to population control; the country's population policy and the different implementing agencies, public and private.
8. Curriculum experiences are probably best determined based on tradition and culture of Thai people. These issues are specific to the Thai system and cannot be answered in the abstract.
9. The population education is related to all other components of curricula directly or indirectly in the formal education system. Therefore, the curriculum experiences should include child growth and development, nutrition, child socialization through interactions in the society, man and environment, population and mental health, human resources versus natural resources with productivity, population and economics, and population and politics, etc. Most important factor of population education is how a teacher can be able to integrate his relevant knowledge and methods for teaching learners at whatever level he is teaching.

10. It would be appropriate to build into the curriculum such experiences in the areas of demography, economics, and social sciences.
11. The curriculum experiences should include the understanding of population policy of the nation and the meaning of population education. There should be courses in problem analysis by selecting the appropriate problem for the learners and their environment in order to help the learner better understand the problem and to be able to select the appropriate solution.
12. Since a certain level of increase in population size is now inevitable, it is necessary to prepare learners to foresee concomitant problems which may be presented, such as increased air pollution in Bangkok accompanying increased traffic congestion, a worsening of the water pollution situation as increasing numbers of people discard wastes in klongs, etc.

IV:A What professional preparation is necessary for teachers to be able to implement and direct population education in Thailand?

1. I want to recommend those teachers who have relatively more community and socially oriented backgrounds. In addition, they should definitely need culturally oriented humanistic approach for successful human relations. This is crucial for the change of attitudes through motivation. I also recommend that this professional educator should have some experiences or should work through the community development system in Thailand in order to reach a majority of population. For the formal education system, the professional educator in population education should have experiences in curriculum development. This would eventually tie to the addition of new textbooks along with the integration of population education in its formal school system in Thailand. This person mentioned above should have a background of population education of a kind described in the answer to question No. 1 (Objective of the program)
2. Courses in the program must include the philosophy of education and community which includes a concern for total life of the people in the community; such courses as:
 - a. Population study
 - b. Demography
 - c. Ecology
 - d. Communication process
 - e. Educational Methodology
 - f. Population Education

IV:B What administrative skills should be included in the curriculum?

1. To develop leadership skill by providing the prospective teacher the opportunity to assist leaders in the local school. This opportunity should be provided in the form of field experiences. During field experiences, this teacher may serve as a resource person in population education to other teachers. He may occasionally participate in meeting with educational and community leaders in order to gain experience and administrative insights.
2. This cannot be visualized unless the role and functions of this teacher in population education and his organization's role and objectives are spelled out in clear terms. However, some suggestions might be helpful in general, for the teacher in population education.
 - a) organization and leadership
 - b) coordination and cooperation
 - c) knowledge of interdisciplinary work
 - d) team work concept
 - e) Knowledge of needs assessment
 - f) management by objectives
 - g) decision-making
 - h) policy, rules and regulations
 - i) pursuance for effective and efficient administration, etc.
3. Methods and Materials Management
 - Professional and subprofessional personnel management
 - Teaching and field service supervision
 - Research in acceptability of small family role
 - Relate field work to classroom teaching
4. Skill for working toward changing the educational systems ("innovation," interpersonal skills, organizational skills). Understanding of and ability to develop goals for population education.
5. The administrative skill of the population teacher should include administrative processes such as: decision making, planning, organizing, communicating, stimulating and evaluating. The prospective teacher should have the opportunity to practice the skills through field work experiences.
6. The skills that should be organized into categories of administrative skills needed by the prospective population teacher who would be working as a leader and coordinator in the school and community are those skills in group process; skills for determining the needs of the school and community in order to find the means to meet these needs; and to evaluate the success of the approach.

7. The curriculum should include provision for the development of administrative skill in accordance with the administrative duties the prospective teacher will perform or be expected to perform after completing the courses, and assigned to a post.
8. Administration of population education programs. Planning, evaluation, and implementation. How to conduct seminars.
9. It is necessary to know what would be the future role of the prospective teacher in order to provide the skills that will relate to the kind of competencies needed for the achievement of that role.
10. The program should provide the teachers the knowledge of management and decision making. The teacher should have the opportunity to deal with real decision making processes during training.

IV:C What about field work as part of preparation?

1. It has been proven that practical experience in the field, under competent teachers, enhances the competence of the prospective teacher or other worker. I believe the positive value of field work has been demonstrated in Thailand.
2. Very important field visits to family planning clinics, rural development projects, etc.
3. Visits to urban and rural health and family planning welfare centers is excellent by involving them in survey and services areas.
4. I think some experiences work in classrooms, special teaching projects, schoolwide presentations, or adult education experiences would be useful. The problem would be to develop the experiences with enough support/supervision so that they would be good learning experiences.
5. Field work as a part of preparation is necessary for the prospective teacher. The experiences provided in the field must be similar to the kind of work that these teachers would be responsible for as much as possible. Field experiences should cover from planning process through the final evaluation.
6. Field work is important in training population education teachers and it should be included in the program. The field work should consist largely of significant work necessary to the future role of the prospective teacher.

7. Field work as a part of population is "A MUST" for the population teacher and it should provide substantial opportunity for creative ideas and activities during the period of field work.
8. Field work is a very necessary part of training program for population education teachers. Through the field work experiences the prospective teachers would become acquainted with their roles. They will gain a better understanding of local problems and practices. They would be able to exercise both theory and practice which would raise the level of their competency for future roles.
9. Field work should consist of teaching and supervision in population education area which may be as a major source of integrating with other course.
10. I think that the field work is important. Therefore, a larger portion of curriculum for population education should be designed for the field work. Hopefully, this field work is related to the captive instructional materials.
11. Field work is an excellent part of preparation. It would help teachers increase the efficiency of their future performance.

IV:D How best might these experiences be organized?

1. The experiences should be integrated with all the subjects (courses) which may offer excellent opportunities for integration such as economics, sociology, health sciences, etc. Perhaps separate courses could also be developed for emphasis, and a course on teaching methodology for majors, if any, in population education. However, all teachers should have the necessary orientation.
2. Through classroom teachings, helping them conduct baseline and evaluation surveys. Demonstration of various means and methods available.
3. I can imagine one course in population education, another on population program administration including evaluation, a short course on teacher training, and including students in the regular media development course(s) where the material they worked on would be population-related.
4. There are two delivery systems as far as I think. They are 1) a formal school, and 2) non-formal education system. I suggest that both of these systems should be adopted for delivery of population education in Thailand.

5. Either in the form of short intensive training course or formal graduate learning program.
 6. Selection and specifying the goals and objectives. Identifying learning experiences and then form structural pattern which relate to learning experience and students' performance.
 7. Identify the basic knowledge and skills required to achieve the objectives of the program, and the learning experiences should be organized around that knowledge and evaluation techniques should be included.
 8. The learning experiences should be organized to provide the skills both in theory and practice in order to provide competent teachers.
 9. The program should consist of two phases (1) provision of population knowledge both theory and practical aspects by inviting specialists in the field as guest speakers and (2) the prospective teacher in the program must have field training in population education in the community and rural areas.
 10. Learning experience should be organized in order to provide skills in both theory and practice. The prospective teacher must learn experiences by practice teaching population education in the classroom. The curriculum should provide experiences in evaluation of a particular plan for attaining behavioral objectives.
 11. Provide variety of courses including actual practice in the field, self study from other sources, such as library study and from experts, etc., field trips and attending seminar.
- V. How should the effectiveness of the teacher graduated from the program be evaluated?
1. It seems to me procedures for evaluation of the effectiveness of teachers should be worked out cooperatively by representatives of the groups concerned; teachers, administrative personnel, students and their parents.
 2. If your instructional objectives and expected educational outcomes are specific and clearly defined, the effectiveness of the teacher should not be difficult to evaluate. Ultimately, changes in behavior of the population should be the best measure as indicated by the change in fertility and birth intervals.

3. Pre-teaching evaluation data should be compared with the post-teaching data from the students. If the difference is significantly more, then the teacher has been effective. In the field, the rate of acceptance will also have to be measured.
4. Sound theoretical research would be desirable but is unlikely to occur much at an early state in program development. At the present state, evaluation needs to center around the quality of materials and teacher's ability to use them (to teach population concepts). As students "graduate" from courses that include population, we need to evaluate how close the outcomes of the courses were to the objective in terms of students understanding and practice.
5. According to the needs assessment, planning the program of population education with clear major and minor categories of objectives should be done for eventual progress, achievement, or problem evaluation. Evaluation should be built-in at the beginning of planning so that the evaluation can be on-going until the completion of one or multiple program(s).
6. The effectiveness of the teachers should be evaluated by the level of achievement of teacher's performance; whether the objectives of the instruction were achieved as they were stated.
7. Appraising the outcomes of the students enrolled in the school population education course to determine if there was any positive change in the students' behavior under defined control criteria.

VI. What recommendations should be made for curriculum change in the future?

1. The impact of population education could not be felt in a short or medium term. As stated by the late Lord Kenyes (Keynes) (J. M.): "for the long run we are all dead." It is necessary for propagation of population education to demonstrate its role and utility for improving the quality of life at a relatively low cost.
2. It is my conviction that the curriculum, teacher preparation programs and evaluation procedures have to be developed within the country or in relation to the culture and situation of the country and with the participation of the country's concerned leaders in the respective fields.

3. The population education along with sex education should be a part of curriculum for all school-going children beyond twelve years of age. The teachers should learn the art of communicating correct information in a scientific but simple manner, so that the students do not have any difficulty in communicating the same information to others.
Note: I think this is a good study and I am sure it will further enhance the cause of population education in and outside the school system of Thailand.
4. Thailand, as other developing countries, has its own uniqueness and characteristics for its population education. This is the most important part to be considered for whatever reason it may be. I think that the population education for the teachers in the formal school system or non-formal education system have to have some kind of written textbooks or some kind of instruction materials for their guidance in addition to their teacher preparation. It is not only in Thailand the need of population education is important and should be materialized through the formal or non-formal education system.
5. The curriculum for the training program must concentrate in field experiences in teaching population education. The prospective teacher should be able to transfer knowledge to the student efficiently and should be able to provide knowledge in problem solving by using the knowledge of all subjects to find the solution to the problem.
6. The population education policy of Ministry of Education was not definite at this time. However, it was necessary to provide courses in demography and population education in teacher training college by integrating into other subjects. It was believed that the use of integration method would yield better results than teaching population education as a separate subject. The objective of population education was not at decreasing birthrate but aiming at improving the quality of individual's lives.
7. Since population education originated from two words population and education, therefore the meaning of population education is based on the definition of education. If we believe that education would provide knowledge to mankind, both negative and positive views, population education would be only the subject that provided facts about population (see Population and the American Future), it should not be concerned much with population problems. However, if we use education to support a particular policy by showing only the negative side of population phenomena, population education becomes propaganda. Therefore, the question becomes, what should be the direction of a population education curriculum for the Thai people, and which educational philosophy should it follow. These kinds of questions would raise new ideas and give a positive direction to population education for the Thai people.

3. As a population education teacher and a member of the community development team, the program should provide the prospective population education teacher with a good background in population education and teaching experience in this area. The course in preparation of population education material must also be included in the program training.
4. The prospective teacher should possess good understanding in population problems and techniques of presenting the problem and the solution of the problem to the students in school and the people in the community.
5. I am not able to give any concrete suggestions. But the courses and practical experiences can best be determined in relation to the type of program the country sets, what are the objectives to be achieved through the schools, etc.
6. Intensive training program of about two or three months would be adequate for the purpose. Better still, an M. A. program in Population Education which will be operated by the Mahidol group would be an excellent preparation.
7. Complete training in population education program or previously taking minimum of one course in population education.
8. The same professional preparation as for other education programs, plus population content is necessary.
9. A B. A. degree with a special emphasis on health and sex, even population educators preferably majoring in that subject. For supervisors an extra year of emphasis on the same subject is recommended. For primary school teachers, it should be a part of their regular training.
10. Receiving training in population education and related population education courses.
11. Population concepts (relation of population to reproduction, family life, economics, environment, policies and the future need to be included)
Strategies for change (the present educational system rarely includes population education)
Teaching methods (traditional teaching methods--reading, lecture--are not adequate to teaching if a change in behavior is a desired outcome, as I think it usually is in population education)
 Also useful: Materials development
 If the person is to "direct: population education, administration, training skills, and evaluation skills are also needed.

APPENDIX I

**LETTER TO POPULATION SPECIALISTS
FOR VALIDATION CRITIQUE**

East Tennessee State University

Department of Supervision and Administration • Box 19000A • Johnson City, Tennessee 37614 • (615) 929-4415, 4430

Dear

As a doctoral student at East Tennessee State University, I am engaged in research that will culminate in a dissertation. The title of my study is "A Population Education Curriculum Guide for Teacher Preparation in Thailand."

You have been selected to participate in this study because of your interest and expertise in population education and/or family planning. Your name will not be identified with any specific answer or part of the study, but your contribution will be very important to me and to the completion of the study. Your participation as a member of the panel of experts will be acknowledged in the appendix.

Enclosed you will find a self-addressed, stamped envelope for your convenience in responding to the interview guide. Your cooperation in answering and returning your response as promptly as possible is greatly appreciated.

Sincerely,

Manit Subhakul

William Evernden, Ed.D., Dissertation Chairman
Professor of Education
East Tennessee State University

Enclosure (Interview Guide)

APPENDIX J

VALIDATION CRITIQUE

Validation Critique

NAME _____

ORGANIZATION _____

DATE: _____

TOPIC: CURRICULUM INFERENCES FOR TEACHER TRAINING IN POPULATION
EDUCATION FOR THE SCHOOL SYSTEM OF THAILAND

COMMENTS & SUGGESTIONS:

Structure of the curriculum guide for the use of secondary school
population teacher

1. The Area of the Study

2. The General Goals

3. The Concepts

4. Content and Generalization

5. Instructional Objectives

6. Learning Experiences

Overall Comments and Suggestions:

APPENDIX K

RESPONSES FROM THE PANELISTS ON THE VALIDATION CRITIQUE

Responses from the Panelists on the validation critique:

1. The overall intent and selection of areas to be covered were approved; however, there are things that need to be done in order to make this a useful guide. The following comment must be taken in the context of general approval:
 - a. Helping teachers use teaching techniques that involve the learner
 - b. Concepts and goals seem to say about the same thing in a different way. They do not seem to add much to each other in the guide.
 - c. The content and generalizations should cover all suggested areas evenly.
2. In general the selected areas in the curriculum guide are good. The selection and modification from the opinions of the experts are appropriate; however, the reasons need to be provided.
3. In the guide generally those goals that could be identified seem suitable.
4. The content and generalizations seem definitely in the right direction. The content should be described fully in all parts, especially in learning and exercises, which information should also be given in the content.
5. Instructional objectives in the sense of overall intent should be made clearer; however, it may be impossible to state behaviorally and therefore may not be satisfactory academically.
6. The instructional experiences in some sections need more alternatives for students to describe or report. This point would be a good place to get the student teaching other students and provide the teacher a list of teaching methods.
7. The learning experiences should focus on the understanding of population education, population policy of the country, the technique for integration, the problem-solving that is appropriate to the student in learning how to solve their own problems which resulted from the rapid population growth in order to improve the quality of their lives.
8. The draft of the curriculum guide shows that a lot has been done by the writer. I wish to commend him on his efforts and achievement.
 - a. I believe it would be helpful if the area heading for each was written so as to stand out more boldly than at present. At first glance, "The Review of Study Areas" seemed to be a heading.

- b. Each part of the area of the study seems to be well thought out. It might be helpful to use the same wording for the same part under each area. For example, "Setting the general Goals" is used in two of the three areas and "General Goals" is used in one of them (see page 5:28, 5:34 and 5:44 of draft copy.)
 - c. Re: page 5:40, 15(a) while family planning may be for family limitation, is it not also for spacing? I am wondering if some of the content suggested in pages 5:37-40 might be covered in anatomy-physiology or biology courses. (see pages 5:37-5:40 of draft copy)
- 9.
- a. The concepts and activities to be integrated into other subject areas need to be clarified at the outset. The teachers would need more specific guidance on when integration should occur.
 - b. The first set of goals should include the needs for learners to understand the role of the individual or couple in contributing to the demographic processes or changing them. You may want to consider introducing this idea.
 - c. Since a certain level of increase in population size is now inevitable, the learners should be prepared to foresee concomitant problems which may be presented; an increase of such environmental hazards as air and water pollution.
 - d. In the individual objectives for the section on population/ (demography) it should describe something the learner can do now or in the future to have an impact on population and/or ecological problems.
 - e. In view of the fact that family planning issues may be very difficult to incorporate in school programs, I would suggest some modifications in the definition as follows:
 - (1) Family planning is the planning and spacing of pregnancies by a couple. The contraception methods which enable a couple to plan and space pregnancies also enable the couple to limit the size of their family as they wish.
 - (2) The widespread practice of family planning will facilitate the reduction of rapid population growth.
 - f. The students should be provided exercises that use actual population projections which do not assume that there will be no change, and thereby come closer to reality.

10.
 - a. The general goals, the rational decision making, should be emphasized and decision making processes should be indicated in some places.
 - b. The definitions of concepts of environment must be already pointed out.
 - c. Some modern instructional media should be demonstrated more than traditional instructional media.
11.
 - a. The instructional objectives should include at least one more objective in determining the ways and means for solving population problems at family and community level.
 - b. The difficulty of the curriculum experts is the tendency to inject too much in a particular subject. They must realize that there are several subjects besides population education to study. Population education content should be approached by integrating it into the relevant subjects.
 - c. The learning experiences are appropriate.
12. The areas of the study appear to cover all aspects necessary for the students to learn and achieve and would be good for them in the future. General goals were set sophisticatedly and practically. The designs of the concepts to fit the general goals were made appropriately.

The content generalizations were specified systematically and accurately. Instructional objectives were well designed. They covered what the students were expected to achieve. It was felt that learning experiences or activities necessary for the students to learn efficiently were given. This seems to be an excellent curriculum guide.

13. The four areas of study for population education programs described in the curriculum guide seemed to have been covered satisfactorily. The goals limited to this curriculum guide have also been clearly described.

I also feel that the concepts have been well stated, especially the instructional objectives seemed to have been well covered. For teaching, this is the most crucial part to be considered for a successful teacher training or student education. Although content generalizations provided in the curriculum guide are provided as a framework in this guide, they have been well considered in four areas. Concerning the learning experiences, the job has been well done based on behavioral terms.

Although you need to go through some trials and errors, I commend you that you have done something really worthwhile for your country and the Thai people. I also believe that motivating teachers to teach students well is the key to a successful education.

14. I have read and examined the draft of your population education curriculum guide. I feel that the areas and content that the student at the secondary school level should know about demography have been well covered. The real objectives of our population education are to encourage the teachers and students to discover and collect population problems in order to analyze the causes and solutions of the problem. In doing this the students would be involved in different ways of solving the problems. I consider your curriculum guide in population education is a necessary sector of total content of population education that the student must know. I would like to make a suggestion for you to add the activities in problem solving method and process in your learning activities. I hope your study will be used for reference in our work in Thailand.
15. The areas of the study seem to be appropriate. However, if this guide were to be used at the teacher training level, it is necessary to provide more information concerning population change of nearby countries. The general goals in each area are suitable and appropriate. I feel that the term "topics" should be used instead of "concept." The content generalization is appropriate. The instructional objectives are acceptable. Again, I would use the term "learning experiences" or "learning activities" instead of "instructional experiences." The content of this area is appropriate.

In general, this curriculum guide is acceptable and well worthwhile. However, the purposes of the curriculum guide must be clearly stated. The topics and sub-topics should be simplified and made easy to understand. The overall comment of this curriculum guide is good and will be very useful for our country.

VITA

MANIT SUBHAKUL

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