AN ALALYSIS OF THE SOCIAL AND EDUCATIONAL SYSTEMS OF LAOS IN VIEW OF ESTABLISHING TEACHER EDUCATION IN AGRICULTURE FOR ELEMENTARY SCHOOL TEACHERS

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This is to certify that the

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ABSTRACT

AN ANALYSIS OF THE SOCIAL AND EDUCATIONAL SYSTEMS OF LAOS IN VIEW OF ESTABLISHING TEACHER EDUCATION IN AGRICULTURE FOR ELEMENTARY SCHOOL TEACHERS

by Bounnong Thipphawong

Purpose. (1) to analyze the collected educational data and the socio-economic information in order to determine the needs of pre-service and in-service training in agriculture for elementary school teachers, (2) to suggest a new educational policy and a new curriculum which will meet the needs of the daily life of the rural folk, and (3) to explain how teacher education in agriculture could make contributions to the national socio-economic development.

Securing of data and method of study. Since first-hand information was impossible to obtain due to political turmoil, primary sources of data included government statistic reports; studies from the Ministries of Education, Economy and Agriculture, and other documents from the archives of the Ministry of Education, and unpublished studies and materials filed at the National Teacher Training Center.

Secondary sources of data included books on Laos; publications from UNESCO, USAID, FAO, ECAFE, and various articles pertinent to the study.

The basic approach to this study was careful reviewing and analyzing of all the available data and information cited above in order to provide a basis for developing courses of study in agriculture for pre-service and in-service training for rural elementary school teachers in Laos.

Findings and interpretations. Laos is predominantly an agricultural country with ninety-three per cent of its population engaged in productive farming.

Economic growth in Laos for the next two decades or more will probably be dependent upon the development of agriculture, animal husbandry, forestry, and fishery. At present, rural youth and adult farmers obtain little, if any, assistance from the Department of Agriculture partly because it is understaffed and there is no institution to train agricultural personnel in the country.

Natural resources are abundant, yet these vast resources are being wasted through misuse and ignorance. Agricultural knowledge and training for the rural folk could be the key to help change and improve this.

Elementary school teachers constitute the largest government body and teachers are spread throughout the country. The National Teacher Training Center is the largest and most important institution training prospective teachers. Therefore, introducing agricultural courses as part of the total teacher training program for rural elementary school teachers will enable them to help rural students and rural folk to cope with the problems of every day living.

This study is an attempt to provide those administratively responsible for the development of teacher education in Laos with the necessary data and information that will enable them to recognize the importance of emphasizing the agricultural program for rural elementary school teachers.

The National Teacher Training Center has the potential to help bring about this change. It also has a distinctive role to play in the socio-economic development of the country through development of a suitable training program for rural elementary school teachers.

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By

Bounnong Thipphawong

A THESIS

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DOCTOR OF PHILOSOPHY

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This work is dedicated to my people
who live in the rural communities
and who engage in productive farming

FOREWARD

Until the political turmoil in 1960 brought Laos into the headlines of most newspapers in the world, it probably was one of the least-known nations in Southeast Asia. Even now there is neither firm statistical nor adequate data about Laos. One book reports that Laos occupies 140,000 square miles, another 90,000 square miles. Population statistics vary, too, even within the same book. One page may list the total population of the country as 3,000,000; a few pages later on, as 1,600,000. In fact, this phenomenon not only appears in the books written by foreign authors, but also prevails in statistical reports issued by the Royal Laotian Government.

With the assistance of Dr. Eugene Debenko, head of the International Library, and other faculty members from the Department of Asian Study and the Department of International Education at Michigan State University, the writer learned that Cornell University is the university responsible for collecting material about Laos in the United States. It was further learned that the English Department for the Asian Region at the University of Michigan has had a contract with the Laotian National Teacher Training Center through USAID ever since the establishment of the NTTC in 1960.

Before investigating the libraries at Cornell University and the University of Michigan, the writer first visited

the Library of Congress, Washington, D.C., known as one of the most comprehensive libraries in the world. With special permission from the Oriental Division of the Library of Congress, the writer was allowed to go to the stacks where most of the material related to Laos is stored. This proved to be a disappointment as the stacks labeled "Laos" were empty except for two of them which were filled with newspapers and commercial type magazines of no value to this study. Three volumes of "General Statistics Reports," a few pre-Second World War books by French authors, and only a handful of pamphlets and monograph papers were found which could be considered as pertinent material for this study.

At the Lao Desk, Department of State, the Desk officers and technical staffs showed great interest, and considered the contribution this study might make to the socio-economic development of Laos. However, they candidly explained to the writer that as far as their experiences revealed, there was little, if any, material about Laos available in this country which could be used as basic information for this study.

From the Department of State, the writer went to the headquarters of the International Volunteer Service hoping that some up-to-date material might be located there since the IVS works directly with the NTTC. A few general topic books similar to those in the writer's own collection were found, but no particular study material was discovered.

Proceeding to Cornell University, the writer expected

that if any important literature were available in this country, it must be located in the Cornell University library. Unfortunately, even with the help of a skilled librarian, the writer once again failed to locate any sizeable amount of literature about Laos. Most of the material was similar to that found in the Library of Congress, the Lao Desk, the IVS, and the writer's own collection. Similar results were met at the University of Michigan. The English Department for the Asian Region made available all of their unpublished material concerning the establishment of the English Division at the NTTC. No new material pertinent to this study was found.

After returning to Michigan State University, the writer began to realize that these limited sources of information were inadequate for setting up a research project. Therefore, the idea of returning to Laos to collect first-hand information was initiated. Unfortunately, all means of obtaining a travel grant were met without success. However, the writer explored other possibilities and with the help of his wife, sent out wave after wave of letters to the Laotian government officials hoping that some information might be obtained. Several months passed; no response was received.

Similar attempts were made to correspond with foreign agencies stationed in Laos. Once again, it was like dropping pebbles into the ocean. With one "coup" succeeding another, this was quite understandable. Under such circumstances, no one had any faith in any strangers; even the Foreign

Minister of Laos was gunned down by his own faithful body-guard!

This situation aroused a few questions in the minds of the writer and his guidance committee members: (1) How far could the writer travel within his own country if he were returning to collect first-hand data? (2) How safe would it be for the writer to travel in the rural areas of the country? (3) What kind of reaction would the people have when contacted by the writer? (4) How truthful would first-hand information be, even if it could be obtained, under existing political conditions?

With travel to Laos to collect first-hand information impossible and because the material available in the United States about Laos was extremely limited, the writer almost abandoned this study project. But with persistent encouragement and advice from the members of the writer's guidance committee, that the dissertation could do more than merely fulfill the requirements for the degree by serving as a blueprint to benefit the writer's own country, the project plans were continued.

At this time, the writer took a different approach to searching for material. Instead of going through governmental agencies, organizations, and official ways of corresponding, the writer leaned upon personal friendships. Surprisingly, a sizable amount of information and literature arrived through personal correspondence.

The writer fully realizes his limitations and the fact that this study was not carried out as comprehensively as he wished it could have been. However, as Dr. Cole S. Brembeck pointed out in his study of "Education and Human Resource Development in Thailand," it "----will be impossible to answer fully questions----until we have much more research data than we have now,----we are not completely empty-handed, however, certain existing data has strong implications in it and suggests some tentative answers----".

ACKNOWLEDGMENT

The writer wishes to express his sincere appreciation to all persons and agencies who have contributed to the development and completion of this study.

The writer extends his thanks to the Institute of International Education for granting him a scholarship during this period of education. Appreciation is also extended to Mr. C. John Dicara, Lao Desk Officer, and Dr. G. Earle Hoshall, Far East Technical Advisory Staff at the Agency for International Development, Department of State, Washington, D.C., and to Miss Phengsy Manoroth and numerous friends at the National Teacher Training Center, Vientiane, Laos for their interest in this study and their generosity in supplying invaluable research material and up-to-date information.

Special acknowledgment, is given to Dr. Guy E. Timmons, Chairman of the writer's doctoral committee, and to Dr. Edgar A. Schuler, Dr. O. Donald Meaders, and Dr. John D. Donoghue, members of the committee, for sharing their time and their experiences in South-East Asia and their inspiration, and most of all for their critical appraisal and their superb understanding of the writer's intention and the needs of the mass population in Laos. Without their continuous encouragement, this study would not have been completed. Their professional advice and friendship will long be remembered, not only by this writer, but also by the people en

mass in Laos who will benefit from this study.

The writer is also indebted to Dr. Harold M. Byram, Chairman of the Agricultural Education Program Area, Department of Secondary Education and Curriculum, and Dr. Eugene Debenko, Head of the International Library, Michigan State University, for their assistance in locating research materials. Their advice and suggestions have been most stimulating.

Special appreciation and many thanks are reserved for Mrs. Laura L. Davis for the liberal use of her time in reviewing the manuscript and repeated typings of the first draft.

The time the writer devoted to this study was taken away from his family, without whose cooperation this study would never have been attempted. The acknowledgment, therefore, would not be complete if particular appreciation were not expressed to the writer's wife, Jane, for her invaluable help and patience, her gracious understanding, and her sharing of grief and joy during these years; and to John, Joseph, and Susan, who did not quite understand, but who also have contributed their share in this study.

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CHAPTER I

DESCRIPTION OF THE PROBLEM AND PURPOSES OF THE STUDY

Introduction

Laos is a vast landbound nation, thinly populated, and a land of extensive agriculture. The overwhelming majority of the people of Laos are subsistence wet-rice farmers. They live in tiny villages along the Mekong River and its tributaries. The minority hill tribes are dry-rice farmers, leading a seminomadic life based on slash-and-burn cultivation in the highlands or on the steep hillsides. To both the villagers and mountaineers, most of whom are illiterate, life is an annual routine of planting, cultivating, and harvesting, dictated by the monsoon cycle.

Industrialization along modern lines is beyond the present reach of the nation. This is because Laos has neither capital, skilled personnel, nor technical know-how to bring it about. Up to the present time, the economic growth in Laos has been entirely dependent upon the development of agriculture, animal husbandry, forestry, and fishery.

Public education in Laos is based on the traditional French system of education. However, the independence of the nation has given rise to the need of education for all. The determined efforts of the Royal Laotian Government to speed up social and economic development have resulted in a visible

increase in the number of primary schools and the student enrollment has skyrocketed at all levels. As a consequence, the long-time shortage of qualified school teachers has become even more intensified, particularly the problem of how to secure and supply qualified teachers in terms of satisfying national goals and aspirations.

Background for the Study

As in other predominantly agricultural countries in Southeast Asia, and in many other parts of the world, the great bulk of the population of Laos is made up of peasants engaged in farming. An estimated ninety-three per cent of them at the present time still continue to follow the traditional pattern of subsistence farming on a family scale.[1] Yet the "Economic Survey of Asia and the Far East, 1955-1962" reported that the Laotian government had imported farm products from neighboring nations in the amount of multimillion dollars annually.[2]

The shortage of food in Laos as evidenced by the amount of food imported and by the relatively low levels of food consumption by the Laotian families should be viewed as a symptom of some basic problems within Laos. The low level

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[1] The Kingdom of Laos, Land of Enchantment in Southeast Asia, revised edition issued by the Royal Embassy of Laos, (Washington, D.C., May 1961).

[2] Economic Survey of Asia and the Far East, 1955-62, United Nations Economic Bulletin for Asia and the Far East (Yale University Press, 1963).

of food production probably is related to many factors since "development involves a complex of mutually related economic, social, and political changes. It is a continuing process of change in a whole society."[3] Some of the factors related to the shortage of food supply in the country are that the peasant in Laos is marked by illiteracy, superstition, low working efficiency, low levels of living, and ignorance of the fundamental rules of hygiene and sanitation, and most of all, the lack of scientific know-how in farming. Another reason making it necessary for the Royal Laotian Government to import a great amount of farm products from the neighboring nations is the inability of the Department of Agriculture to fulfill its responsibility. This is due to many factors. For example: the Department of Agriculture is under-staffed; any attempt to increase the number of agricultural agents demands an increase in the national budget, and most likely will not be accepted by the National Planning Committee. Furthermore, it is impossible to make such an attempt to search for additional agriculturalists because there is no single agricultural institution in the country to train such personnel. Finally, the provincial agricultural services are located in the provincial capitals and there is no means of transportation nor road facilities for personnel to reach the

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[3]Katz, Saul M. and Frank McGowan, A Selected List of U.S. Readings on Development, Prepared for the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas (Agency for International Development, Washington, D.C., 1963), p. xii.

rural villagers or for the villagers to market their products.

This study is attempting to provide those administratively responsible for the development of teacher education in Laos with the necessary data and information so that they may recognize the importance of emphasizing the agricultural program for the elementary school teachers in the rural area. And subsequently, this study provides the authorities with a series of agricultural courses for developing a plan to establish the first agricultural institution within the existing framework of the national education system, and suggests ways of training the rural school teachers to be able to work cooperatively and supplimentarily with various government agencies in the national interest and for the welfare of the mass population in the rural communities.

The majority of the student population is in the rural areas and in recent years the enrollment in the elementary schools shows a dramatic increase. In 1946 the student population was 14,700, while in 1963 it was 121,053; yet this figure represents only one-fifth of the children who were in the compulsory school-age bracket in 1963.[4] In other words, the enrollment in the elementary schools will continue on the up-swing curve in the years to come when the educational facilities accomodate and allow it to do so.

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[4] Rapport Statistique de l'Enseignment Primaire, edited by Khamphao Phonekeo, Ministere de l'Education (Vientiane, Laos, 1964).

In the academic year 1963-64, educational statistics show that the total capacity of secondary school enrollment in the entire nation was 4,235.[5] Only a small fraction of the sixth year elementary school graduates could be admitted to continue their education beyond the sixth grade level, regardless of their high academic performance and their willingness and desire to continue their education. Thus, a problem arises: Where do these youngsters go? What kinds of salable skills for the development of their rural community are they equipped with when the educational process in the elementary schools is characterized by slavish memorization and sterile cramming of subject matters that are prescribed from without?

Purposes of the Study

Until recently, comparatively little had been done to attack the problem of illiteracy in a scientific and professional way. Not too many years ago there were no public schools as we know them today. Elementary education was left largely to the Wat (Buddhist temple or pagoda) schools which were operated by the Buddhist monks. It was not until the last fifteen years that a handful of the "Groupe Scolaires" was erected in the large centers of the Muong (district administrative center or "market town").

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[5] Rapport Statistique, (Direction Generale de l'Education), Annee Scolaire 1963-64, Ministere de l'Education Nationale, Royaume du Laos.

The fatalistic indifference by the French and the local "elite" to the needs of the masses during the French occupation; the over-development of the Europeanized system of education for the privileged of the present time; and the ever-present fear of the "elite", a residual toxicity from their outmoded "protector" that the masses might be educated away from their control; all of these have had a part in postponing the day when a determined attack would be made on the problem of illiteracy of the masses.

Realizing that the Laotian society has undergone continual changes economically, socially, and educationally, particularly since the independence of the country in 1954, it is, therefore, an inherent part of this study to explore ways in which further contributions can be made to the socio-economic development of Laos in the path of change through improving educational processes and strengthening instructional content for the prospective teachers at the National Teacher Training Center, because upon graduation, they in turn will go out to educate the masses in the rural communities.

The purpose of this study is three-fold. First, to gather socio-economic information and to analyze the collected educational data to determine the needs of pre-service in in-service training in agriculture for rural elementary school teachers in order to develop a series of courses of study to equip them with practical skills and theoretical knowledge in the field of agricultural education. Second, to discover

and to explain how teacher education in agriculture at the National Teacher Training Center will fit into the total teacher education program and to show how this program could make contributions to the national socio-economic development of Laos. Third, and most important, to suggest a new educational policy, a new teaching procedure, and a new curriculum which will meet the needs of the daily life of the rural folk and thus enable them to improve their standard of living.

Scope of the Study

This study is focused on the following areas. First, the social structure of the folk-urban continuum in Laos is described and analyzed. Second, data on the natural resources, agricultural production, and farm facilities are collected and interpreted in relation to the socio-economic development in the country. The third area is focused on the present educational system and process and their effects on rural elementary schools. This is followed by tracing the evolution of teacher education with particular attention to the changes in the curriculum.

An attempt will be made to develop a detailed course of study in agriculture for the prospective teacher at the National Teacher Training Center, as well as for the rural teachers who are already in the field. Finally, an analysis will be made to discover and to explain how the agricultural program at the National Teacher Training Center fits into the total teacher education program and how this agricultural

program could make contributions to the national socio-economic development.

Some Basic Assumptions

This study is undertaken with a number of assumptions in mind. These assumptions are:

1. That the majority of elementary schools are located in the rural areas.
2. That many rural youth cannot afford to attend secondary school after graduating from the elementary school.
3. That secondary education is available to a very small fraction of those who desire to and are academically able to go beyond the sixth grade.
4. That little or nothing can be done at the present time to assist a greater per cent of potential elementary school graduates to attend secondary school until substantial portions of the local staffs of the secondary schools can be trained.
5. That the prospect of training local teaching staffs for secondary school is likely beyond the reach of the Royal Laotian Government at the present time.
6. That industrialization along modern lines is beyond the present reach of the nation.
7. That there is a general shortage of all kinds of manpower at all levels, except unskilled labor.

8. That economic growth in Laos for the next two decades will be heavily dependent upon the development of agriculture, animal husbandry, forestry, and fishery.
9. That the perspective planning and effectiveness of the use of human resources in Laos in the next two decades is vital to the national socio-economic development.
10. That the Laotian Department of Agriculture is still in the stage of infancy, and under-staffed. Agricultural agents do not have sufficient training in agriculture.
11. That both rural youths and adult farmers need improvement in skill and knowledge in agriculture for proficiency in farming.
12. That rural youths and adult farmers desire new and/or additional skills, knowledge, and understandings in order to attain greater proficiency in farming.
13. That the rural youths and adult farmers obtain little assistance and advice, if any, from the Department of Agriculture.
14. That the National Teacher Training Center is the only institution preparing prospective teachers to teach in the rural elementary schools, and that there is an urgent need for training in agriculture at the Center for prospective rural school teachers.

15. That the training in agriculture for the pre-service and in-service elementary school teachers can make contributions to the improvement of farm practices and better utilization of agricultural resources.
16. That elementary school teachers are better trained and have had more schooling than most of the other government employees in the nation.
17. That elementary school teachers are the largest unit of the existing government body.
18. That most of the pupils in the rural elementary schools have a need for systematic instruction in farming while they are in school as well as out of school because most of them will return to farming after completing elementary school.
19. That there is a need for dealing more intelligently and effectively with agricultural resources in Laos if the nation is preparing to become self-sufficient in the near future.
20. And finally, that there is an urgent need for raising the standard of living of the farm people who compose ninety-three per cent of the total population of Laos.

Source of Data and Limitations of Study

Since the prospect of collecting first-hand information was not feasible due to financial difficulties, time limitations, and the military-political situation in the area, this

study is confronted with severe limitations.

Primary sources of data for this study included government reports and studies such as "Annuaire Statistique du Laos" from the Direction de la Statistique, Ministere de l'Economie Nationale; "Rapport Statistique" from the Direction Generale de l'Education, Ministere de l'Education; and other documents from the archives of the Ministry of Education. Unpublished studies and materials filed at the National Teacher Training Center were also utilized.

Secondary sources of data included books on Laos, publications from UNESCO, FAO, ECAFE, USAID, and the French journal, "Bulletin Economique de l'Indochine," and others related to the subject in general plus various articles pertinent to the study.

This study is further limited by the lack of firm data. This lack exists in such matters as the statistics relative to population, total cultivated land, total domestic food production, malnutrition and disease incidence, the size and occupational distribution of the labor force, gross national product, and so on. In such situations, the best available data was used in spite of the probability of considerable error because some tentative answers to the feasible socio-economic development of the nation can be drawn from this existing data.

In view of the various limiting factors cited above, this study is delimited to the National Teacher Training Center at Dong-Dok, Vientiane in attempting to establish

agricultural programs as part of the total teacher education-for prospective rural elementary school teachers, and for the rural school teachers already in the field.

Definition of Terms

Elementary school: there are four types of elementary schools in Laos.

a. Groupes Scolaires--usually have more than one classroom and offer instruction from grades one' through six.

b. Village schools--actually are the outposts of the "Groupes Scolaires". In most cases, they are one room schools and offer instruction from grade one through grade three.

c. Pagoda schools--held in the temples and offer instruction up to the third grade. These schools are operated by the Buddhist monks.

d. Private schools--usually offer instruction up to the third grade.

For the purpose of this study, the term public elementary school refers to the first two types of primary education.

Lower cycle of elementary school--refers to the first three years of education in the primary school.

Upper cycle of elementary school--refers to the last three (fourth through sixth grades) of education in the primary school.

Junior high school--refers to secondary education from grade seven through grade ten.

Senior high school--refers to secondary education from grade eleven through grade twelve with the exception of the Lycee de Vientiane which offers grade thirteen as a college preparatory course.

Vocational agriculture--for the purpose of this study, vocational agriculture is designated as systematic instruction in agriculture given in addition to general education at the fifth and sixth grade levels.

National Teacher Training Center--the highest teacher training institution in Laos, offering a four-year training program for prospective teachers. Upon completion of this training course, the graduate has the equivalence of a tenth grade education and is qualified to teach in grades one through six in the elementary school system.

Prospective rural elementary school teacher--a teacher trainee at the National Teacher Training Center preparing to teach at least five years in the elementary school in the rural area.

Rural area--town or village with a population of less than 1,000, the majority of which engage directly in farm production.

Pre-service teacher training in agriculture--a program of systematic instruction in agriculture for prospective rural elementary school teachers with an intensive course dealing with all phases of farming.

In-service teacher training in agriculture--a series of courses of systematic instruction in agriculture during the summer

vacation for a period of four to six weeks. This training program would consist of class instruction followed by practice at the school farm at the National Teacher Training Center.

Inspectors--title given to the district agents who are in charge of evaluating teachers and controlling instructional programs in the elementary schools.

CHAPTER II

REVIEW OF LITERATURE

Through a review of literature, the first part of this chapter attempts to describe the components of total teacher education and to show the proportion and distribution of each component in the total teacher training program. In light of this, the writer hopes to be able to suggest ways in which agricultural training courses may be incorporated into the total teacher education program in Laos.

The second part of this chapter investigates agricultural programs which were offered in the United States in the early twentieth century at the seventh and eighth grade levels. This is done in order to discover the course content and emphasis to assist in developing a course of study in agriculture for the Laotian elementary school teacher who has an educational level of seventh through tenth grades. It seems to this writer that in Laos today the emphasis in agricultural training should be on productive agriculture as it was in the United States in the early 1900's.

The third part of this chapter reviews agricultural programs for the upper elementary grades which were offered in the early 1900's in the United States when most of the students who were enrolled in agricultural programs went directly to productive farming occupations after graduating

from the eighth grade. In Laos today most rural students do not continue education beyond the sixth grade, but go directly into productive farming, thus these agricultural programs are relevant and offer guidelines for developing programs of study in agriculture at the elementary level in Laos.

The Total Teacher Education Program

Teacher education is sensitive to the underlying forces which move society. Even in the formative years of the American normal school, the American teacher education program prior to 1865 already called for innovations in many dimensions of life, particularly in the formal educational institutions.[1] Borrowman further pointed out that in the context of total teacher education, one must keep in mind the problem of the whole three areas of education--general, specialized, and professional.[2] The point is lost when some educators too loudly insist that the whole of teacher education must be organized in terms of the concepts or disciplines to which they are particularly attached.

Conant presents two existing curriculum illustrations in the field of teacher education for elementary school teachers in the United States. (In these illustrations, the names of the teachers colleges are fictitious.)

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[1]Merle L. Borrowman. The Liberal and Technical in Teacher Education (Columbia University, New York, 1956), p. 27.

[2]Ibid., pp. 228-35.

Two programs for the education of elementary school teachers[3]

Courses	Riverdale College	Lakeside College
	Semester hours required	
*General Education	51	56
Academic Major	24	none
Electives	14	16
Educational Psychology, History, Philosophy, and Sociology	12	11 1/3
Methods and Materials of Teaching	6	14
*Courses designated as Special Content Courses for Elementary School Teachers	none	18 2/3
Practice Teaching	15	8
Total semester hours	122	124

*Note the contrast in these items

As Conant notes, both Riverdale and Lakeside are single-purpose teacher-preparing institutions. Even though their programs indicate little disagreement in respect to general education, striking differences exist between the required semester hours in academic major and professional training. Both colleges are now in the process of broadening their functions to provide prospective teachers with training programs which will better suit the needs of the present society.

Conant concludes by saying that a four-year teacher training program includes both the breadth of education

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[3]James Bryant Conant. The Education of American Teachers (New York, 1963), pp. 146-148.

required and the necessary special knowledge essential for the elementary teacher. The following table combines his suggestions and conclusions.

A Proposed Curriculum for the Education of Elementary School Teachers[4]

	Sem. hrs.
General Requirements	60
The English Language	6
Western World's Literary Tradition	6
History (at least one half other than American)	9
Mathematics	6
Philosophy	3
Science (physical and biological studied consecutively)	12
Economics, Political Science, Sociology, and Anthropology	9
Introduction to General Psychology	3
Fine Arts (art or music)	6
Physical Education (non-credit)	
Concentration	30
(The designation of certain areas, or lists of courses in each of which the student must complete a certain number in the discipline area.)	
Professional Sequence	30
Most of these courses will be in the senior year.	
Child growth and development, with extensive laboratory experiences	3
History, philosophy, or sociology of education	3
Teaching of reading	
for teachers of grades 4-6	3
for teachers of K-3	minimum of- 6
A series of intensive workshops in the content and method of elementary school subjects	10-13
Year-long laboratory experiences accompanying course work above and including at least 8 weeks of practice teaching, involving minimum of 3 hours daily in the classroom	8

[4] Ibid., pp. 158-60.

One of the most comprehensive reports on the total teacher education program that this writer encountered is presented by Stratemeyer and Lindsey.[5] Teachers in the United States are prepared not in one type of institution of higher education, but in every type--single-purpose teachers colleges, multi-purpose state colleges, liberal arts colleges, junior colleges, and universities. A teacher may be prepared in a private institution or a publicly supported college or university. This diversity is viewed as being wholesome for several reasons. It provides maximum opportunity for institutions and individuals to use their creativity and ability in developing programs. It encourages experimentation and research on a variety of approaches to the education of teachers. According to Stratemeyer and Lindsey, "regardless of the type of teacher training institution, the common components of teacher education programs, in all probability, include three major parts:

1. General Education
2. Specialization, and
3. Professional Education"[6]

The goals of general education programs as Stratemeyer and Lindsey list them are:

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[5]Florence B. Stratemeyer and Margaret Lindsey, Working with Student Teachers (Bureau of Publications, Teachers College, Columbia University, New York, 1958).

[6]Ibid., p. 25.

> (1) to assist each student in the development of physical and mental well-being; (2) to help each student master the art and skills of communication; (3) to aid each student in deepening his understanding of our culture, its institutions, and values, its relation to other cultures of the world, past and present, its current problems and its future hopes; (4) to help each student acquire the values and sensitivities which contribute to intelligent citizenship in a democracy, and (5) to provide each student with opportunities to acquire basic acquaintance with the bodies of human knowledge as they relate to understanding, meeting, and dealing effectively with social and personal problems.[7]

The second component in the teacher education program is specialization. The prospective teacher selects a subject or a broad area in which to specialize because he is looking forward to teaching in that field. Karls, whose extensive study on teacher training in agriculture will be discussed in the next section, suggests that the prospective rural teacher should be permitted to major in agriculture since he is expecting to teach in the rural areas where pupils come from farm families.[8]

Professional education makes up the third component in the total teacher education program. This component, according to Stratemeyer and Lindsey, includes systematic study of "(1) human growth and development, (2) the nature of the learning process, (3) selection and organization of curriculum experiences, (4) history and philosophy of

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[7] Ibid., p. 26.

[8] Glenn Edward Karls. Course of Study in Agriculture for the Elementary and High Schools of Southwest Missouri with Suggestions for Teacher Preparation for These Courses (Ed.D. Thesis, University of Missouri, 1946).

education, (5) general and specific methods of teaching, and (6) laboratory experiences, direct contacts with children, youth, and adults in school and community."[9]

To show the composition of credit hours for the three components, an illustration by Stratemeyer and Lindsey follows:

A Total Program for Students Preparing To Teach in the Elementary School[10]

	Sem. hrs.
General Education	43
Professional Education	22
Physical Education	2
Specialized Requirement (includes both academic and professional courses)	43
Subject-matter Concentration	12
Electives	8
Total	130

The course distribution and credit allocation were summarized by Stratemeyer and Lindsey as follows:[11]

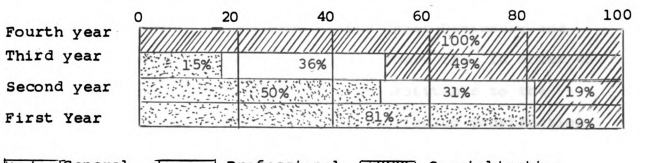
Area	Total Credit (Sem. hrs.)	Credit Distribution (Sem. hrs.) 1st	2nd	3rd	4th
General Education	47	26	16	5	0
Specialization and Electives	61	6	6	16	33
Professional Education	22	0	10	12	0
	130	32	32	33	33

[9] Stratemeyer and Lindsey, op. cit., p. 28.

[10] Ibid., p. 31.

[11] Ibid., p. 33.

The relative amounts of time a student would devote to each area can be seen in the following graph:



The student would devote 36 percent of the total four-year program to general education, 47 per cent to specialization and electives, and 17 per cent to professional education. However, it should be noted that the 47 per cent of his total program allocated to specialization and electives includes some professional work.

Agricultural Programs for the Seventh and Eighth Grades

One relatively important study of agriculture as a basis for determining programs for the seventh and eighth grades was conducted by George Butler in 1937 in the Upper Peninsula of Michigan.[12] The major reason Butler made this study was that he discovered that most of the texts used in the seventh and eighth grades at the time did not appear to have any close correlation between the subject matter

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[12]George Sherman Butler. An Analysis of the Agriculture of the Upper Peninsula of Michigan as a Basis for the Seventh and Eighth Grades (M.S. Thesis, Michigan State University, 1937).

contained in the texts and the practical applications in the area. For example, in one of the textbooks, there were seven pages dealing with the cotton boll weevil and only approximately one-half as much space was given to potatoes; and yet the potato was the leading crop of the Upper Peninsula and boll weevils were non-existent there. Therefore, in order to build a curriculum which would be most profitable to the pupils in the area, Butler based his curriculum construction on two major factors:[13]

1. The conditioning factors in agriculture of the Upper Peninsula such as:
   a. Variations in climatic conditions in the Upper Peninsula.
   b. Classification of the number and size of farms by counties, crop areas harvested.
   c. Types and distribution of crops grown in the Upper Peninsula.
   d. Marketing of Upper Peninsula products.
   e. Farm tenantry situation in the Upper Peninsula.
2. Agricultural activities of rural boys and girls of the Upper Peninsula such as the 4-H Club projects in dairying, potato growing, home gardening, forest ranger, and earning projects.

In 1946, another similar but much more extensive study was carried out in the southwest Missouri region by Karls.[14] Employing identical techniques to those used by Butler, Karls sent out questionnaires to the seventh and eighth grade agricultural teachers and the county agents to determine the (a) agricultural trends--kinds of agricultural enterprises; (b) facilities available in the farm communities

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[13] Ibid., pp. 10-13.

[14] Karls, op. cit.

and the needs of the communities; (c) the purposes of education at the seventh and eighth grade level; (d) the time available for the teaching of agricultural courses at the seventh and eighth grade level, and; (e) the training of the rural teacher.[15]

Keeping these factors in mind, the following appeared to be desirable objectives to Karls for a rural agricultural program in the seventh and eighth grades in southwest Missouri;[16]

1. To develop appreciations and abilities in the major enterprises of southwest Missouri.
2. To develop appreciations and abilities in certain minor and contributing enterprises of the area, including vegetable gardening and fruit production.
3. To develop appreciations and abilities in the conservation of the soil and other natural resources.
4. To develop appreciations and abilities in the maintenance and improvement of the farm and homestead.
5. To develop appreciations of the agricultural vocations and rural life.
6. To develop appreciations of the agricultural resources of the area, state, and nation.

After gathering and evaluating the information received from the questionnaires in light of his stated objectives, Karls outlined agricultural study courses. As a consequence, he proposed a course of study for the seventh grade with time allotments based on a total of 160 days or eight months of the school year.[17]

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[15] Ibid., pp. 149-50.

[16] Ibid., pp. 221-22.

[17] Ibid., p. 180.

1. Poultry----------20 days
2. Dairying----------20 days
3. Gardens and small fruits---17 days
4. Conservation----------10 days
5. American agriculture------ 8 days

The following representative units are taken from Karls' study and show the proposed time allotments and seasonal sequences for the course of study in the seventh grade in southwest Missouri.[18]

Week	Job	Days
2nd	Harvesting and storing garden crops----------	1
3rd	Conserving the soil----------	3
6th	Raising the dairy calf----------	2
7th	Feeding the dairy cow----------	2
8th	Selecting dairy cattle----------	2
9th	Determining the importance of the dairy industry-	2
14th	Determining the importance of the home vegetable garden----------	1
	Manuring, plowing, and preparing the seed bed for vegetables and small fruit----------	1
15th	Determining the possibilities in gardening for the part-time or suburban farmer----------	1
	Determining the importance of poultry enterprise-	1
	Determining the food value of poultry food products----------	1
16th	Identifying and selecting breeds of chickens-----	2
17th	Determining the importance of agriculture-------	1
	Determining the kinds of farming----------	1
	Realizing the interdependence of town and country----------	1
18th	Determining the value of the farm as a place to live----------	2
20th	Growing perennial garden crops----------	1
	Propagating and caring for grapes----------	1
21st	Choosing the kind and variety of vegetables for home garden----------	1
	Planning and arranging the garden crops----------	2
22nd	Securing the seeds and plants for the vegetable garden----------	1
	Planting and fertilizing the garden----------	1

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[18] Ibid., pp. 180-83.

Week	Job	Days
25th	Growing blackberries, raspberries	1
	Cultivating the garden	1
	Controlling insects and diseases of the garden	1
26th	Conserving water	2

In addition, Karls presented a detailed outline of the various jobs and suggested questions to provide basic clues for determining course content. For example, in one of his job topics, such as harvesting and storing garden crops, the questions he listed were:[19]

1. When are garden crops ready for harvesting?
2. What factors should be considered in harvesting the garden crops?
3. How can harvesting methods be improved?
4. What are the best methods for storing vegetables for home use?
5. What garden crops can be stored for winter use?
6. What vegetables must be consumed when harvested?
7. Why is it important to use vegetables at the right stage of development?

Karls followed this procedure for each job topic.

The suggested units that Karls outlined for the eighth grade course of study with proposed time allotments were:[20]

1. Farm animals---------- 25 days
2. Farm crops---------- 20 days
3. Soils---------- 14 days
4. Farm home---------- 10 days
5. Farm engineering---------- 6 days

Representative units showing the proposed time allotments and seasonal sequences for the course of study in

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[19] Ibid., p. 184.

[20] Ibid., p. 221.

the eighth grade in southwest Missouri as proposed by Karls were as follows:[21]

Week	Job	Days
1st	Determining the importance of hog production-----	1
	Selecting hogs----------	2
2nd	Identifying breeds of hogs----------	2
3rd	Determining the requirements for hog production--	1
	Marketing hogs----------	1
4th	Determining the importance of beef production----	1
5th	Determining the requirements for beef production-	2
6th	Identifying breeds of beef cattle----------	2
7th	Supplying plant food in the soil----------	2
8th	Caring for barnyard manure----------	2
9th	Using commercial fertilizer and lime----------	2
	Caring for farm equipment----------	1
10th	Determining the contribution of the soil to the welfare of the community, state, and nation--	2
11th	Understanding the processes of soil formation----	2
12th	Identifying a fertile soil----------	2
13th	Cultivating the soil----------	2
14th	Planning and improving the farm layout, landscaping the home grounds----------	1
15th	Selecting and caring for trees and shrubs--------	3
16th	Developing and maintaining the lawn----------	2
18th	Determining the importance of the legume crops---	2
19th	Selecting good seed and desirable varieties of legumes----------	1
	Determining the requirements for legume production----------	1
20th	Determining the importance of pasture and hay production----------	2
	Improving pastures and meadows----------	1
21st	Determining the importance of the corn crops-----	2
	Identifying and selecting varieties of corn------	1
22nd	Determining the requirements for corn production-	1
	Identifying and controlling insect pests and diseases of corn----------	1
23rd	Selecting and caring for flowers----------	2

Karls presented a detailed outline of the various jobs in the course of study for eighth grade similar to those given for the seventh grade.

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[21] Ibid., pp. 222-224.

Teaching Agriculture in Elementary Schools

"Agriculture in the grades is something more than nature-study," said Nolan in 1918, "It is nature-study plus utility. It is nature-study with an economic significance."[22] He further pointed out that since the last chance for pupils to study agriculture in a systematic way in school would be in the seventh and eighth grades, the major topics of agriculture must be taught as thoroughly and as practically as possible. Furthermore, it should be assumed that the students are studying agriculture to prepare for the vocation of farming, and hence the practical vocational features should receive the emphasis. In summary, Nolan said that the purposes of teaching agriculture to the seventh and eighth graders are:[23]

1. To teach practical vocational agriculture.
2. To help boys and girls to become producers and thereby lessen the high cost of living.
3. To teach business methods and thrift by promoting the selling of products and the canning of the surplus.
4. To stimulate the community spirit in boys and girls through the organization of neighborhood or school clubs.
5. To capitalize and turn to good account the gang spirit naturally inherent in boys, by directing their vacation activities along social as well as economic lines.

Three decades later, Hamlin suggested the following feasible provisions for agriculture education in the

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[22] Aretas W. Nolan. The Teaching of Agriculture (Houghton Mifflin Company, Boston, 1918), pp. 21-2.

[23] Ibid., p. 27.

elementary schools:[24]

1. The rural elementary school subjects can be taught with proper regard for their agricultural relationships and uses. It is good teaching to recognize the farming background from which the pupils in many elementary schools come and to build upon it. Farm problems are to be used in arithmetic. Agricultural literature can be used in classes in reading. The relationships of local farming to world conditions can be brought out in geography.
2. Blocks of time can occasionally be set aside for the upper-grade pupils to be devoted to special agricultural subjects, such as:
   a. Soil conservation.
   b. Improving the appearance of the farm home.
   c. Agricultural agencies and the services they provide for farmers.
   d. Agricultural occupations and how to prepare for them.
   e. Farm safety and accident prevention.
   f. Farm insects, their identification and control.
   g. Farm fire prevention.
   h. Weed identification and control.
3. The soils, shrubs, crops, and animal life on and adjacent to the school grounds can be studied. Agricultural activities can sometimes be conducted, in the school and on the school grounds, such as controlling minor soil erosion, seeding grass, planting a garden, planting shrubs, etc.

The major difficulty encountered in the teaching of elementary agriculture is that the teachers are unprepared to teach it. However, Carsie Hammonds holds the view that agriculture cannot be left out of good elementary school teaching because the elementary teacher and his pupils will

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[24]Herbert M. Hamlin. Agricultural Education in Community Schools (The Interstate Printers and Publishers, Danville, Illinois, second printing July, 1950), pp. 209-11.

meet something of an agricultural nature in their usual subjects every day, such as:[25]

How ordinary plants grow.
Low forms of plant life--molds, bacteria, etc.--
how they live and reproduce.
How ordinary plants and animals reproduce.
Soil formation and conservation.
Identification and control of insects.
Birds and how they affect farming and farm life.
Trees and shrubs for the farm home.
Farm animal health as related to feed.
Contributions of agriculture to society, and to
the welfare of man, etc.

Since agriculture varies from nation to nation, from one region to another, even within the same state or country, there are many different types of farming. Therefore, there is no general course that can be satisfactorily prepared for an entire state. Garris suggests that in order to organize the course of study in agriculture to suit the local community which it serves, a teacher must be acquainted with the local farming facts, conditions, and situations, and he may secure a great deal of usable information by following these procedures:[26]

1. Contacting various agencies and representatives.
   a. The county agricultural agent
   b. The supervisor of the Farmers' Home Administration
   c. Soil conservation agents
   d. Local farm organizations, etc.
2. Obtaining copies of studies and reports.
   a. Federal census (farm)
   b. State census (farm)

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[25]Carsie Hammonds. Teaching Agriculture (McGraw-Hill Book Company, Inc., New York, 1950), pp. 229-230.

[26]E. W. Garris. Teaching Vocational Agriculture (McGraw-Hill Book Company, Inc., New York, 1954), pp. 115-16.

c. Land use
d. Farm management

3. Making surveys and contacting farmers in the community.
   a. Inventory survey
   b. Home-improvement surveys
   c. Enterprise surveys
   d. Farm-mechanics survey
   e. Visits to leading farmers

After utilizing all the above methods for securing local farming data, the teacher should consult an advisory council of farmers and businessmen or organize such a council if none exists. By the time he has made these contacts and gathered and organized his material, the teacher should be able to determine:

1. The types of farming in the community.
2. The relative importance of the various agricultural enterprises in making a contribution to the income.
3. The most important and urgent farm problems.
4. The factors associated with successful farming.
5. General farming conditions, such as drainage, soil fertility, markets, and home conveniences.
6. Long-time trends in land use, water use, changes in types of farming and rural living.

Summary

In considering the literature reviewed thus far, indications are that teacher education is composed of three components: (1) general education, (2) technical education, and (3) professional education. Each of these components has its important role to play in the total teacher education. In the current practice, laboratory experience becomes a vital part of the teacher education program.

In the early 1900's, when the major portion of the American population was still engaged in production farming,

and when most of the farmers did not attend school beyond the elementary level, the agricultural programs offered in the elementary schools were largely organized around the improvement of crops and farm animal production. It was assumed at that time that students enrolled in agricultural classes were preparing for the vocation of farming. In the southern part of the United States, even as late as the mid-1940's, where educational opportunity was falling behind in the national race, Karls reported that agricultural programs offered in the seventh and eighth grades were stressing crop improvement and animal production to a great degree.

Successful programs of agriculture depend upon well-trained and properly qualified teachers. However, if the instructional programs of the schools are going to make maximum contributions to the immediate needs of the learners, they must be examined and modified to meet the situations of the daily life of the pupils whom they are intended to serve.

CHAPTER III

THE SOCIOLOGY OF THE FOLK-URBAN CONTINUUM IN LAOS

Laos is predominantly rural with ninety-three per cent of its population engaged in farming activities. Of this rural population, an estimated twenty-three per cent are mountaineers, and seventy-seven per cent are peasant villages.[1]

The majority of the population of Laos is scattered deep in the countryside. The average human pressure on the land is thirty-three persons per square mile. However, in the most heavily populated area of Laos, the Mekong River plains along the Thai border, the population density may reach 180 persons per square mile. Compared to this area and the Vientiane plain, most of the Laos countryside is relatively empty.[2]

The aim of this chapter is to describe and analyze the structure of the folk-urban continuum in Laos. As this writer sees it, the folk society progression probably begins with the primitive mountain tribes. The next level is the

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[1] Annuaire Statistique du Laos, Ministere de l'Interieur du Laos, 1955.

[2] See Appendix I.

peasant rural villages which make up the major part of the population of Laos. The third level, the market towns, serve as the link between the peasant rural villages and the metropolitan provincial capitals at the other end of the continuum.

The Mountain Tribes

The term, "mountain tribes," refers to the Meo, Yao, Kha, and other minority groups whose villages are located in the mountainous terrain or on the steep hillsides at an elevation of some 3,000 to 4,500 feet above sea level.[2]

The Kha is the general name applied to the very diverse group of indigenous inhabitants who occupy most of the mountainous areas in the central and southern parts of Laos. These people lack both a writing system and formalized political organizations beyond the village level.

Meo and Yao have strong patriarchal influences in the family and village organization. They share a common origin in China from which many of them migrated to the northern part of Laos during the middle of the nineteenth century.[3] The Meo are distributed sporadically in northern Laos from Yunnan south to Phou Khao Kouai (thirty-seven miles north of Vientiane), but are concentrated mainly in Xieng

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[2]Joel M. Halpern. Economy and Society of Laos, Monograph Series 5, (Southeast Asia Studies, Yale University, 1964), p. 6.

[3]A. R. Mathieu. Chronological Table of the History of Laos (France-Asie Press, Paris, France, 1959), p. 45.

Khouang province. The Yao are found chiefly in southwestern Sam Neua, around Nam Tha town, and to a lesser extent in the Luang Prabang and Vang Vieng areas.

In general, these groups of mountain tribes exhibit many aspects of life in common. However, even though they may be separated only by a few miles, groups or tribes within the Kha remain separate, and cultures, customs, and languages do vary. The people live in small, isolated, homogeneous communities of perhaps a dozen or more scattered families, each family with its bamboo cabin and cornpath. There is no school, no church, nor any other formally organized institution, and in most cases, these mountaineers have little communication with the rest of the country.

These mountaineer minority groups are dry-rice farmers. They also plant maize, tobacco, red pepper, taro, and other limited crops. Farming is largely by means of the slash-and-burn method. At the beginning of the dry season in January, trees and underbrush are cut down to make a clearing of adequate size for the coming year's crops. At the end of April, the dry wood is set on fire, and the land is cleared. The decision of when to set fire to the cut-down trees and underbrush is attended with much anxiety. If fire is set too early, the wood will not completely burn because it is not dry enough; if the farmers delay too long, however, the first monsoon rains may fall and soak the wood so that it will not burn at all. This is disastrous because it means that they will not be able to plant until the next year.

In the mountaineers' practices, planting methods are primitive. The plow is seldom used partly because stumps and roots remain in the soil. Holes for two or three grains of rice are stamped into the ground with the naked heel, and the planting is completed. After the fertility of the soil has been exhausted, the land is abandoned; then a new plot is cleared, and the cycle begins again. This process must be repeated at least every fourth year.

According to Vercoutre's report,[4] the vast forest areas of the steep hillsides in the northern part of the country have been destroyed by this primitive slash-and-burn method of farming. Soil erosion is tremendous since replanting the forest trees is not common practice, and the mountaineers are unaware of the consequences. Each year tens of thousands of tons of fertile top soil wash down to streams and rivers below, turning the water on its way to the South China Sea to a chocolate milk color during the monsoon season.

The Peasant Villages

Unlike the Meo, Yao, and Kha tribes, the peasant villagers are subsistence wet-rice farmers. They live in small villages composed of fifty to one hundred families along the fertile banks of the Mekong River and its

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[4]Claude Vercoutre. "L'Economie du Laos", (Vientiane, Laos, 1960), Memio, pp. 14-15.

tributaries. These annually flooded plains are the site of the civilization of ancient Laos. The waters of the Mekong River and its tributaries furnish fish and local transportation for the peasant villagers. Furthermore, it is through these villages that for centuries Laotian trade has worked its way into the heart of the mountain groups, thus keeping the country a sovereign entity.

The peasant villagers, unlike the mountaineers, have had relatively constant contact with the market towns, and, in some instances, with the provincial capitals as well. Because contact has been established, the peasant villagers, in some cases, are no longer self-sufficient in their moral or intellectual life. They know of, and gradually have become dependent upon more technologically advanced people. Even though they still love and are attached to their native soil, they appreciate and envy the life in town. They bring their farm products down to the market towns or to the provincial capitals to sell and usually return home with something that they could not obtain in their community, or perhaps something that is better-made than theirs--tools, clothes, medicines, etc.

The peasant community is still homogeneous and small enough so that every adult can know everyone else and the individual peculiarities of each personality. On the whole, all men share the same essential knowledge, practice the same arts of life, have the same interests and similar experiences. A privileged stratum is absent as almost everyone, except the school teachers and Buddhist monks, must work at food

production in order to survive.

Religion (Buddhism is the national religion of Laos) is not a separate activity, but diffuses all aspects of daily life. Moral order is strongly emphasized in the peasant society. Old people are highly respected. Nearly every village has a Buddhist pagoda, and sometimes there are two in the larger communities. The abbot of the local pagoda is the most respected person in the village. The priesthood is his life's work.

In general, the primary school is the only other large building in the village, and the rural school teacher also enjoys the villagers' respect, even though he is often young. A third important person in the village is the "Pho Ban" -- the Father or Head of the village. He is chosen from among the most honored heads of the households, and often is one of the most well-to-do men in the community.

The peasant villager usually owns the land he cultivates. Rice is his main crop. Since there are no irrigation facilities, and since rice is a semi-aquatic plant requiring large amounts of water, the quantity and distribution of the precipitation during the monsoon season is of vital importance. Individual rice fields are small and are surrounded by a low ridge of earth that helps to retain water. The rice yields per unit hectare (2.471 acres) are varied. An estimated average is 0.8 ton per hectare,[5] or about one-third

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[5] Annuaire Statistique du Laos (Direction de la Statistique, Ministere de l'Economie Nationale Royaume du Laos, Vientiane, Laos, 1954), III, 1951-52, p. 42.

the yield achieved by the Chinese farmer in Taiwan which is 2348 kilos per hectare.[6] Increased rice production in the peasant villages could be brought about by better seed selection, improved methods of preparing the soil, and by the use of more insecticides, pesticides, and fertilizers.

The peasant villagers grow a variety of crops other than rice since most of the daily-needed food must be produced from their own fields. Vegetable gardens are planted on the fertile banks of the river or stream. Fruit trees are scattered around the surrounding area near the house. Fish are netted or trapped in the Mekong River and its tributaries. It is not uncommon to see one or two water buffalo, a few hogs, and a dozen or more chickens owned by most of the families in the peasant community. However, all farmers have to spend long hours from dawn to sunset in order to obtain enough food for the members of their families. This writer believes that with education, improved methods of communication with the outside world, and assistance and advice from the Department of Agriculture, the life of the farmer could be greatly improved.

It has been reported in many foreign books, magazines, and newspapers that the peasant villagers are reluctant to change their traditional way of life; that even those who are

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[6]Chen Cheng-Siang. Taiwan, An Economic and Social Geography (Fu-Ming Geographical Institute of Economic Development, Taipei, Taiwan, China, 1963), I, Research Report 96, p. 269.

considered to be progressive farmers will work only when they feel it is necessary, and that in the long-run they will retain the traditional ways of doing things and reject the new and improved methods. Perhaps this has been true in the past, but today this observation seems no longer valid. The writer would like to quote part of the text of a letter received in the winter of 1965 from a foreign friend who was assisting the Laotians in the Department of Agriculture and the Service of Rural Affairs:

> The most encouraging thing about Laos is that the favorite AID experts' canard to the effect that "if the simple Laotian peasants are given fertilizer and insecticides to double their yields they will only plant half as much," has been exposed for all time on a big United Nations Far-East Extension Project near Vientiane where Laotian farmers are growing two and three times as much as before and building new houses with extra income. The Lao, like everybody else I've met so far, want to move forward. It is finding good technicians who are willing to get down and really work with them that is difficult.[7]

From this text, the challenges that await the rural elementary school teacher are illustrated; and once he is equipped with sound knowledge and improved agricultural practices, he should be able to help young and adult farmers.

The Market Towns (Kong or Muong)

"In every isolated little community there is civilization, and in every city there is the folk."[8] This quote

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[7]Personal correspondence.

[8]Robert Redfield. The Little Community Peasant Society and Culture (University of Chicago Press, 1961), p. 47.

describes the market towns of Laos. These towns, usually located on river banks, are transfer points and serve as local market centers. They are vital links between the peasantry and the provincial capitals. The population in the market towns ranges from 1,000 to 2,500.

In contrast to the peasant villagers, who all must work at food production in order to survive, technology and social organization have developed to the point where some persons can support themselves as full-time non-agriculturalists--as rulers, merchants, and artisans.[9] However, this group is necessarily small for the amount of surplus food and raw materials is still so minute.

Although there are many aspects of life similar to those in the peasant society, the communities in these market towns are neither homogeneous nor isolated. There are Chinese merchants, Vietnamese retailers, and sometimes French advisors in the administration who bring a new dimension to the society. Due to the constant contact with the capital cities, the process of social stratification is gradually taking place in the market towns.

Since most villages are too small to have markets of their own in which to exchange goods, peasant villagers gather at the market towns. Each morning dozens of pirogues loaded with rice, fish, fruits, and vegetables pull up at the

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[9]Gideon Sjoberg. The Preindustrial City Past and Present (University of Texas, 1960), pp. 121-22.

market center. Villagers sell their farm products in the morning and return home before noon with items they need and which cannot be obtained in their own villages.

Manufacturing is a small-scale undertaking confined usually to craftsmen in the home. The craftsman performs all the steps from beginning to end. For example, the goldsmith or silversmith starts with the raw materials and finishes by decorating the item himself, and usually he is also the salesman who sells the products that he has made.

There is a "Group Scolaire" in every market town and it is no longer a one-room elementary school, as is usually seen in the rural villages. The teacher of the upper grades serves as the part-time school administrator in addition to teaching full-time.

The Provincial Capitals and the National Capital

In contrast to the small market towns, the provincial capitals, and especially the national capital of Vientiane, serve as intermediaries in international commerce. The community is no longer small, isolated, homogeneous, and self-sufficient; but the melting-pot of races, peoples, and cultures, and a most favorable breeding-ground for new biological and cultural hybrids.

For centuries Laos has absorbed the impact of foreign cultural influences and immigration of foreigners into the country. The culture of Laos today, particularly in the five large capitals: Vientiane, Luang Prabang, Thakhet, Savannakhet, and Pakse, shows a mixture of Hindu, Buddhist, Thai, Vietnamese,

Chinese, Khmer, French, and more recently, American influence. Laotian living in these five big cities depicts evidences of Western culture--newspapers, movie houses, bars, night clubs, air conditioned offices, and American, European, and Japanese-made cars in the streets. The wealthier people, mostly merchants and government officials, are moving rapidly towards a Western standard of living.

Industry still is in its infancy. The industrial development that has characterized the years since the independence in 1954 is limited largely to small-scale enterprises such as garages, brick works, and carpenter shops. Installations in Laos resembling to any extent modern industrial enterprises are the cigarette factories near Vientiane, a small tin mine near Thakhet, a soft drink factory at Savannakhet, and the rice mill at Pakse.

The introduction of any embryonic industry into the economy becomes a formidable problem because there is almost no skilled nor semi-skilled labor available. In addition, transportation routes which are not adequate for the moving of raw materials and manufactured products, must be developed before any but the most simple, primary industries can be introduced. Not only has Laos no railroads, but there are no more than 3,500 miles of roads and paths, most of which can not be used in the rainy season. The only existent north-south bound highway, the so-called "Route 13", is so dusty in the summer and so muddy during the monsoon season that even the water buffalo would respect it.

The development of power resources in Laos at present is in the earliest stages, with only a few of the provincial capitals having even rudimentary electricity:

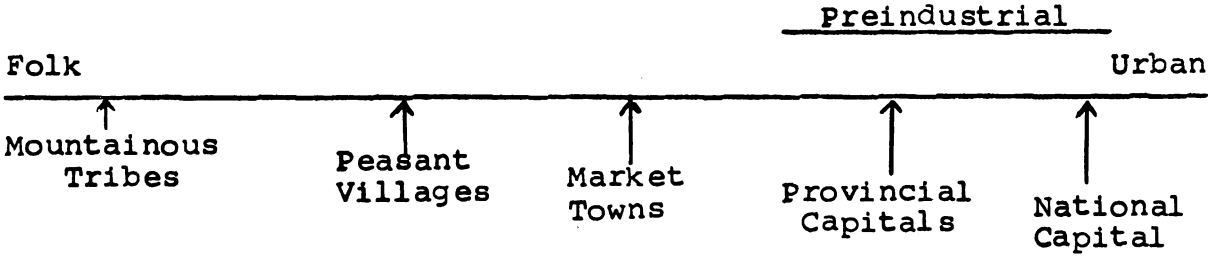
Vientiane	2200 kw.
Luang Prabang	110 kw.
Thakhet	60 kw.
Savannakhet	60 kw.
Pakse	60 kw.
Saravane	60 kw.

These stations are strictly local, supplying current only in their immediate vicinities. The electric power produced is inadequate, erratic, and could not under any conditions support industrial development.[10]

Vientiane, the national capital, by far the largest city in the country, had an estimated population of 64,000 in 1959. The remaining provincial capitals all fall into categories of under 10,000, with the exception of Luang Prabang which had an estimated population of 15,000 in 1959.[11]

Summary

On the line of folk-urban continuum, Laotian communities seem to fall into the following categories:



[10] Frank M. LeBar. Laos (R.A.F. Press, New Haven, 1960), p. 108.

[11] See Appendix II.

The primitive, isolated mountain tribes constitute a small per cent of the population of Laos while the peasant villagers, who are predominately wet-rice farmers, make up ninety-three per cent of the population. Market towns serve as links between the peasantry and the urban dwellers.

The provincial capitals and the national capital have felt the influence of Western civilization to some extent; however, since the amount of surplus food available to support an urban population has been limited by unmechanized agriculture, lack of transportation, inefficient methods of food preservation, and not even an embryonic stage of industry in the modern sense, it seems reasonable to assume that there is no sign of drastic change towards urbanization in the Laotian society.

CHAPTER IV

NATURAL RESOURCES, AGRICULTURAL PRODUCTION AND FARM FACILITIES IN LAOS

The purpose of this chapter is to present, describe, and summarize data about the natural resources, agricultural production, and farm facilities in Laos. In this part of the study, an attempt will be made to answer several important questions regarding the agricultural resources in relationship to the socio-economic development in the country. These questions are:

- How do the natural resources of Laos lend themselves to agriculture?
- How is the farm land of the nation utilized?
- What constitutes the basic agriculture in Laos?
- What are the most important farm enterprises in Laos?
- What major kinds of crops are produced in Laos?
- How important is the raising of livestock in the agricultural development of Laos?
- Of what importance are forestry and fishery?
- What per cent of the population is rural?
- What kinds of facilities are available in the farm communities?

General Character of Natural Resources and Land Use in Laos

As Paul Boulanger states: "Le Mekong donne ses affluents la vie au Laos comme le Nil constitue l"Egypte."[1] --Like the Nile to Egypt, the Mekong plays an important role in the daily life of the Laotian people,--for it is the Mekong River and its tributaries that drain all of Laos. It is on these annually flooded fertile plains that the paddy rice fields are found. It is through the Mekong water system that local transportation is possible, and it is from these waters that the peasant villagers and urban dwellers obtain fish, clams, shrimp, oysters, etc., the most important sources of protein in the Laotian diet. And it is in this very region that the civilization of ancient Laos blossomed. The socio-economic development of Laos has been and is largely determined by the geographical character of the nation.

Undoubtedly, Laos is characterized by its mountainous topography, particularly in the northern region where the highest summits are found. The Annamite mountain chain forms the natural eastern frontier with Vietnam, and gradually levels off and slopes down towards the west to the Mekong River. The Xieng-Khuang Plateau is located in the north central highlands and the Bolovens Plateau is in the south, as illustrated in the map in Figure 1.

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[1] Paul Le Boulanger. Histoire du Laos Francais (Librairie Plon, Paris, France, 1931), p. 6.

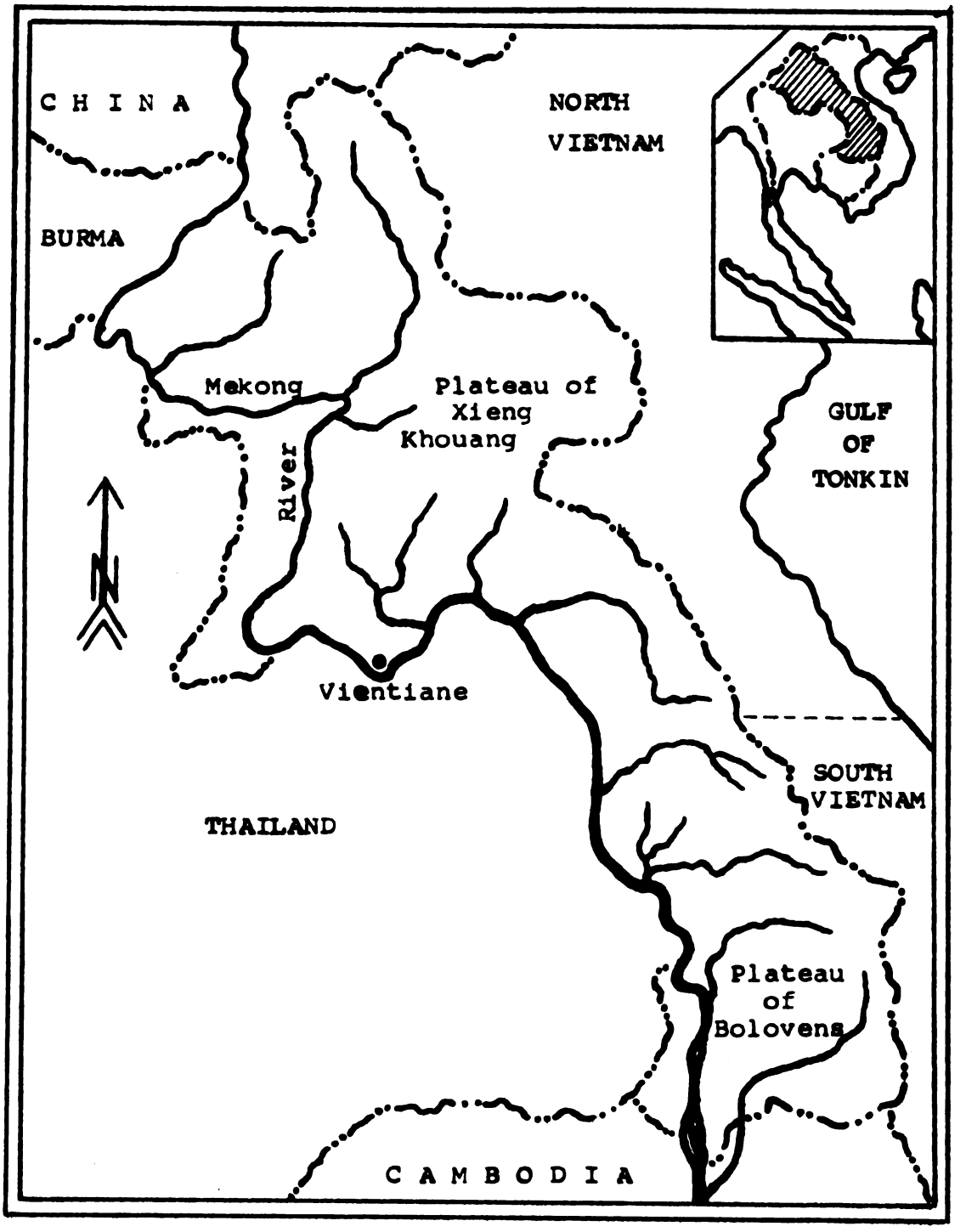

Figure 1. MAP OF LAOS SHOWING THE MEKONG RIVER, ITS TRIBUTARIES, AND THE LOCATIONS OF THE XIENG KHOUANG PLATEAU AND THE BOLOVENS PLATEAU.

Innumerable rivers, flowing from north to south or southwest in the northern region, and from east to west in the southern region, are mighty natural resources for potential irrigation facilities and hydraulic power. River valleys support existing crops of rice and various vegetables and afford unlimited fertile areas for agricultural endeavors yet untried and undeveloped.

More than any other single factor, the rain-bearing southwest monsoon from the Gulf of Siam and from the Indian Ocean controls the climate of Laos.[2] The climate of the country is tropical with clear-cut dry and rainy seasons. During May, the rain begins, and its greatest intensity is reached during June, July, and August. During September, the rain lessens; in October, it ends. The winter season begins in the month of November with pleasant, mild weather lasting until February. Then the hot, dry season commences and the dryness of the summer is accentuated by the barrier of the "Chain Annamitique" on the eastern frontier of the country which blocks off all precipitation and ocean breeze from the Pacific Ocean.

About two-thirds of the 120-150 rainy days in the year occur in the rainy season, with the amount of precipitation about eighty-five per cent or more of the total annual

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[2]Henry Yves. Governement General de l'Indochine, (Imprimerie de l'Extreme-Orient, Hanoi, Indochine, 1943), pp. 2-3.

rainfall.[3] The rice crops in both the paddy fields and the uplands are, of course, dependent upon this rainfall pattern. The average rainfall the nation receives annually is approximately fifty to eighty inches, while the central portion of the Bolovens area receives well over 150 inches of rainfall.[4]

Temperature ranges are greater with distances inland and higher altitudes, and temperatures in the low thirties (Fahrenheit) have been recorded in the Plateau of Bolovens and in northern Laos.[5] The hottest months are March, April, and May, just before the arrival of the summer monsoon. During this period, the piercing sun shines fiercely from a cloudless sky, and temperatures may sometimes reach 100° F.[6] Fields are parched and brown, creeks and rivers dwindle in size, and even in the middle of the night there is little change in temperature.

In general, the most fertile areas in Laos--the flood plains of the Mekong River and its tributaries--are covered by freshly deposited alluvium, relatively rich in humus and plant nutrients. On the balsalt Plateau of Bolovens,

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[3]Joel M. Halpern. Economy and Society of Laos (Southeast Asia Studies, Yale University, 1964), Monograph Series 5, p. 1.

[4]Ibid.

[5]Paul Dauplay. Compte Rendu des Travaux (Institut des Rechers Agronomiques et Forestieres, Imprimerie d'Extreme-Orient, Hanoi, 1936), pp. 122-23.

[6]Ibid.

weathering has produced the famous "terre rouge" or red soil, which is of relatively high fertility. In the Plateau of Xieng-Khuang the soil is somewhat less fertile, but the climate is uniquely favorable. Unfortunately, the soil natural resources of the country have been misused through the slash-and-burn method of cultivation and inadequate crop rotation and fertilization.

The presence of many rivers, tropical climate, and fertile soil permits a variety of agricultural activities in Laos. "Laos is a rich and fertile country. There is farming in the valleys, cattle-breeding on the table-lands, and forestry along the banks of the rivers."[7]

Major Farm Crops in Laos

Rice

Rice is by far the most important crop grown in Laos. It is both the principal food crop and the main source of farm income for the rural villagers.

There are two kinds of rice in Laos--(1) paddy rice, and (2) upland rice. Paddy rice is also known as "glutinous rice" or "sticky rice", and is quite different from the rice grown in Vietnam, Japan, and China. Paddy rice is grown by the peasant villagers in the low land on the submerged paddy field, while the upland rice, in most cases, is grown by the

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[7]Rene Tissot. Geographical and Human Aspects, Kingdom of Laos (France-Asie Press, Paris, France, 1959), p. 14.

mountain tribes on the hillside dry land.

One of the most thorough studies concerning different methods of rice cultivation in Laos has been carried out by Kaufman.[8] The following paragraph is one of his skillful observations and descriptions. It vividly shows how a villager cultivates his land, plants his rice, and harvests his crops.

> By late May, after the rainy season has begun to soften the ground, the paddy fields are plowed and harrowed with a wooden plow drawn by buffalo. (Seed)lings from the previous year's crop are soaked for four days and sown broadcast in an area prepared as nursery beds while small dikes are being built around the paddy fields. The young rice seedlings are ready for transplanting after anywhere from six to twelve weeks, depending on the type of rice. The arduous task of transplanting is usually done cooperatively, with small groups of people pulling the seedlings, clearing the roots, and tying the young plants into small bundles to deposit in the corners of the fields preparatory to the actual planting. By the end of August most work in the paddy fields is completed and delegated farmers begin their stay in temporary huts in the fields to guard the young crop from marauding animals. The rice matures in 150,120, or 90 days according to the type used, the most common being the first, or heavy variety. On larger holdings more than one type is grown in order to stagger the harvesting. Usually all harvesting has been completed by the end of December. Threshing, accomplished by beating the harvested plants against boards or by flailing them with sticks, is followed by milling in a foot-operated wooden mortar and pestle device. During the peak of the dry season in January and February the fields dry and begin to crack; the buffalo munch the remaining stubble.[9]

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[8]Howard K. Kaufman. "Village Life in Vientiane Province," 1956-57 Laos Project Paper 12, ed. Joel M. Halpern, (University of California, Los Angeles, 1961), mimeo.

[9]Ibid., pp. 3-4.

The main areas of rice production are in Champassak, Saravan, Savannakhet, and Vientiane provinces. The total cultivated areas have been tremendously increased in the past two decades. In 1948, Vercoutre reported that the total rice cultivated area could be estimated at 185,325 hectares, with an average output of a ton (1,000 kilograms) per unit hectare.[10] In 1951, the Bureau of National Statistics reported that there were 328,450 hectares of rice cultivated in the country with .7 ton per unit hectare, and 499,550 hectares by 1952 with an average of .8 ton per unit hectare.[11] Figures detailing cultivated areas by province are presented in Table 1. Encouragingly, the cultivated area does not stop here, for in 1960 Vercoutre gave a figure of 700,000 hectares or almost eighty per cent of the cultivated farmland in Laos.[12]

According to the "Five-Year Plan" issued in 1959 by the Ministry of Planning for the period June, 1959 to July, 1964, the nation would need 770,000 tons of paddy rice annually.[13] Based on survey and statistical calculations,

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[10]Claude Vercoutre. "Present State of Laotian Economy," Kingdom of Laos (France-Asie Press, Paris, 1959), p. 460.

[11]Annuaire Statistique du Laos (Direction de la Statistique, Ministere de l'Economie Nationale Royaume du Laos, Vientiane, Laos, 1954), Vol. III, 1951-52.

[12]Vercoutre, 1960, Ibid., p. 5.

[13]Plan de Developement Economique et Social du Laos, Period de 5 ans, du 30 Juin 1959 au 1er Juillet 1964 (Commissariat au Plan, Royaume du Laos, Vientiane, Laos, 1959).

TABLE 1. RICE CULTURE: ESTIMATION OF CULTIVATED AREA, PRODUCTION PER UNIT AND TOTAL PRODUCTION BY PROVINCES IN 1951-52.

Provinces	1951			1952		
	Area (1000 ha.)	Production (tons)	Ton per ha.	Area (1000 ha.)	Production (tons)	Ton per ha.
Champassak	58.0	57,100	0.9	78.5	65,750	0.8
Saravane	25.0	18,700	0.7	40.0	40,450	1.0
Savannakhet	40.1	25,110	0.6	70.0	66,500	1.0
Khammouane	32.5	17,100	0.5	54.5	47,350	0.9
Vientiane	75.0	60,000	0.8	81.1	72,000	0.9
Luang Prabang	60.6	42,200	0.7	70.0	59,950	0.9
Xieng Khouang	40.5	28,550	0.7	48.6	33,470	0.7
Houa Phane	29.0	30,000	1.0	38.4	31,400	0.8
Phongsaly	15.5	10,800	0.7	31.6	21,450	0.7
Houa Khong	19.8	12,760	0.7	30.4	20,580	0.7
Sayaboury	40.6	26,130	0.6	44.7	40,650	0.9
Totals	386.6	328,450	0.7	585.8	499,550	0.8

Source: Annuaire Statistique du Laos Troisieme Volume 1951-52 (Direction de la Statistique, Ministere de l'Economie Nationale Royaume du Laos, Vientiane, Laos, 1954).

Latest available data from the Bureau of Statistics.

the country should be able to produce approximately 860,000 tons of paddy rice. However, the Economic Survey of Asia and the Far East revealed that in 1959, the Kingdom of Laos had spent a monthly average of 23.1 million kips (eighty kips per one United States dollar) or $288,750 importing farm products from the neighboring countries, and 27.2 million kips ($340,000) monthly average in 1960.[14] In the succeeding year, Ginsburg conducted a comparison study on rice production in Asian countries. He pointed out that the average yield of rice per unit hectare in Laos was only thirty per cent that of Japan.[15] The low yield per unit area in Laos is due to improper farm management and the use of unimproved cultivation practices. In the tropical zone where heavy rainfall is concentrated in certain months of the year, such as in Laos, tremendous amounts of plant nutrients are leached away from the soil because of continuous waterlogging. Therefore, increased rice production in Laos could be achieved by applying suitable forms of fertilizer, using improved varieties of rice, improving methods of cultivation and water distribution, and by controlling pests and diseases.

Major Crops other than Rice

Maize (corn)

Besides rice, other major crops play a valuable role in the economic geography of the nation. One of these, maize,

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[14] Ibid.

[15] Norton S. Ginsburg. The Pattern of Asia, (Prentice-Hall, New York, 1961), p. 425.

is an important second crop in Laos. It is raised all over the country, but cultivation is especially concentrated in the northern region of Laos where maize has been used as a supplementary food to the upland rice in the mountaineers' diet. The distribution of cultivated area, total production and yield per unit hectare is presented in Table 2. Noticeably, the production per unit hectare is extremely low. Corn varieties and cultivation practices have been the limiting factors. Since the Second World War, corn field cover area has been reduced rather than increased, partly because of the decline in exports of corn as chicken feed to France.[16]

Coffee

The raising of coffee in the Plateau of Bolovens is of economic importance to Laos. The common quality "Arabica" variety has done very well in the area of altitudes above 2,250 feet. In 1950, coffee plantations covered an area of approximately 2,500 hectares. A production of 1,500 tons was the highest of Laotian agricultural exports.[17] However, the period of hostilities has prevented proper attention to the plantations and in recent years attacks from a pest (Hemileia Vastatrix) have caused considerable devestation. A few years ago a resistant variety of coffee, "Robusta", was introduced to the area, but because of its mediocre quality there is no point nor economic value in producing it.

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[16]Ginsburg, Ibid., p. 426.

[17]Vercoutre (1959), Ibid., p. 461.

TABLE 2. CORN: ESTIMATION OF CULTIVATED AREA, PRODUCTION PER UNIT AND TOTAL PRODUCTION BY PROVINCES IN 1951-52.

Provinces	1951			1952		
	Area (ha.)	Production (tons)	Production per ha.	Area (ha.)	Production (tons)	Production per ha.
Champassak	500	120	0.2	710	380	0.5
Saravane	350	100	0.3	500	290	0.6
Savannakhet	1,000	700	0.7	1,300	925	0.7
Khammouane	1,060	220	0.2	980	580	0.6
Vientiane	1,200	720	0.6	1,075	970	0.9
Luang Prabang	500	350	0.7	550	550	1.0
Xieng Khouang	1,500	1,200	0.8	2,160	1,130	0.5
Houa Phane	1,300	3,120	2.0	1,660	2,280	1.4
Phongsaly	500	350	0.7	650	450	0.7
Houa Khong	2,020	1,650	0.8	1,470	1,145	0.8
Sayaboury	8,730	1,390	0.2	4,370	1,550	0.4
Totals	18,660	9,920	0.5	15,425	10,250	0.7

Source: Annuaire Statistique du Laos Troisieme Volume 1951-52 (Direction de la Statistique, Ministere de l'Economie, Nationale Royaume du Laos, Vientiane Laos, 1954).

Latest available data from the Bureau of Statistics.

An estimate made by Yves placing the possible exploitation area suitable for coffee culture at 35,000 to 45,000 hectares[18] would no doubt put the Kingdom of Laos on the top list among the major coffee producing nations in the world. However, before coffee production can be of stable export value to Laos, plantations must be restored and enlarged, a good quality variety of coffee must be introduced, and proper cultivation methods must be employed.

Tobacco

The cultivation of tobacco is spread out all over the country with the present major production areas along the Mekong River and its tributaries. Tobacco could become an important crop on the Bolovens Plateau in the near future because both the climate and soil are suitable. In 1956 the total tobacco production of the country was estimated to be over 1,000 tons of dry tobacco.[19]

Potatoes

At one time potatoes were an important crop in the Bolovens Plateau. In 1950 when the famine swept over the coastal area of Vietnam, thousands of tons of potatoes were trucked to the area from the Bolovens Plateau and brought back millions of kips for the farmers. Unfortunately, since the potato is not the main food for the local people, and because

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[18]Henry Yves. Terres Rouges et Terres Noires Basaltiques d'Indochine (Imprimerie de l'Extreme-Orient, Hanoi, 1939), p. 127.

[19]Vercoutre, (1959) Ibid.

export to the surrounding nations is unlikely for the same reason, potato production has steadily declined in recent years.

Cotton

Years ago cotton was grown everywhere in the country. For centuries it played an important role in the life of the Laotian for use in home weaving. Today, although cotton still is raised in most parts of the country, the increase of cotton yarn imports has greatly reduced its demand. In 1959 the cultivated area covered approximately 1,500 hectares with a yield of about 300 tons annually.[20]

Peanuts

Peanuts are cultivated in most parts of Laos. The nut and oil are used to some extent locally, but peanuts are grown primarily for export. The distribution of peanuts and of cotton, coffee, ramie, and tobacco in 1951-52 is presented in Table 3.

Fruit and Other Vegetable Crops

Pineapple has done exceedingly well on the western edge of the Bolovens Plateau since its expansion in the area in the 1950's. It could be further developed to become a major crop for canning the fruit and juice for export. Other leading crops raised on the northern edge of the Bolovens Plateau such as red pepper, pimento, cardamom and

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[20] *Ibid.*

TABLE 3. COTTON, COFFEE, RAMIE, PEANUT, AND TOBACCO, AND THEIR ESTIMATION OF CULTIVATED AREA, PRODUCTION PER UNIT BY PROVINCES IN 1951-52.

Provinces	Cotton		Coffee		Ramie		Peanut		Tobacco	
	Ha.	Ton per Ha.	Ha.	Ton per Ha.	Ha.	Ton per Ha.	Ha.	Ton per Ha.	Ha.	Ton per Ha.
Champassak	600	0.1	1,510	0.4	28	0.2	90	0.4	140	0.2
Saravane	50	0.3	800	0.2	72	0.6	200	0.6	80	0.4
Savannakhet	320	0.2			10	0.5	300	0.7	390	0.6
Khammouane	40	0.5			1	1.0			140	0.4
Vientiane	20	0.2					270	0.9	360	0.7
Luang Prabang	20	0.2	100	0.2			150	0.5	25	0.4
Xieng Khuang	10	0.2	150	0.3			65	0.5	25	0.4
Houa Phane	20	0.2								
Phong Saly	20	0.2					30	0.5	70	0.5
Houa Khong	217	0.3					10	0.8	130	0.7
Sayaboury	26	0.4					21	1.2	150	0.5
Totals	1,343	0.2	2,560	0.3	111	0.6	1,136	0.6	1,510	0.5

Source: Annuaire Statistique du Laos Troisieme Volume 1951-52 (Direction de la Statistique, Ministere de l'Economie, Nationale Royaume du Laos, Vientiane, Laos, 1954).

Latest available data from the Bureau of Statistics.

other spices, jute, and ramie, could become export crops of importance when time and circumstances permit proper development.

Vegetables and tropical fruits such as banana, papaya, mango, coconut, jack-fruit, and tamarind, are raised to some extent in almost all of the villages and are an indispensable part of the people's daily diet. Improved cultivation practices could increase production greatly.

The climate and soil of the Xieng-Khuang Plateau lend themselves to peach, strawberry, and other sub-tropical and temperate zone fruits, in addition to truck farming crops. The same is true of litchi. One of the finest litchi this writer has ever seen has been raised on the central part of this plateau for twenty years. Yet at the present time, the people are unaware of its economic value and production is limited to the family table. Citrus fruits are grown in the Nam Tha area, and once again production costs could be cut in half by improving methods of cultivation. Thus, crops could be expanded for export as well as for local consumption.

Farm Animals

The raising of livestock plays a secondary, though significant, role in the agriculture of Laos. As contrasted with some regions of the world where major emphasis is on the raising of animals for food and derivative products, farmers in Laos raise livestock principally as a sideline.

Animal husbandry is a multi-purpose endeavor for Laotian farmers. For example, oxen are raised for their labor,

meat, and for income. This is also true in the case of water buffalo, although because of their aquatic adaptability, they are kept by the farmers chiefly as draft animals for plowing the paddy fields.

Dairy farming is practically non-existent in Laos partly because the strains of cows introduced were susceptible to tuberculosis. The farmers did not know how to care for dairy cattle and there were no veterinarians available to advise them. A third contributing factor for the failure of dairy farming in Laos is that the Laotian people do not drink milk.

Southern Laos has the biggest livestock concentration, particularly in the Sedone, Sebanhien, and Sebanfay valleys, as well as in the sparsely-wooded regions. In most cases these animals are left without much care and live in semi-freedom around the villages and woods. Before World War II a considerable number of cattle were exported to Thailand, Cambodia, and South Vietnam. Owing to the state of emergency, lack of veterinary facilities, and improper care, livestock farming has been greatly affected. It will need building-up again before exports to the neighboring nations can be resumed.

Poultry raising rates second in farm animal production. It provides an important source of income for the farmer and supplies part of the meat in his diet, since hogs, oxen, and water buffalo seem too large for a family to butcher.

The business of raising hogs has become widespread across the country in recent years, and the future outlook is very promising. However, additional experiments on hog breeding (as well as for other farm animals) are badly needed in order to improve the stock.

The control of disease, prevention of epidemic, and improvement of feeding and pasture land are needed if stock farming is to be successful in Laos. Hundreds of oxen and water buffalo, thousands of hogs, and tens of thousands of poultry have been ravaged whenever the epidemic cycle arrived, causing considerable losses for the individual farmers as well as hurting the national economy.

The distribution of farm animals in each province and their totals are presented in Table 4.

Forestry and Fishery

Laos is one of the most richly forested areas in South-East Asia. In 1960 Vercoutre reported that forests have covered an estimated 150,000 square kilometers which is approximately sixty per cent of the nation's total area.[21] However, much of the originally forested areas has been cut down or burned over and as much as fifty per cent of the originally forested areas has been replaced by a park-like savannah and open forest, "forets clairiere".

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[21] Vercoutre (1959), Ibid., p. 14.

TABLE 4. FARM ANIMALS: ESTIMATION BY PROVINCES IN 1957-58 (HEADS).

Provinces	Water Buffalo	Oxen (heads)	Horses & Mules	Hogs	Poultry
Savannakhet	112,700	72,200	1,400	62,400	284,000
Houa Khong	19,800	6,600	3,600	16,600	160,300
Champassak	61,400	24,800	400	41,800	277,200
Saravane	49,300	29,300	1,000	26,400	173,000
Attopeu	18,900	4,500	100	7,400	45,000
Phongsaly	6,300	4,900	1,300	13,900	50,000
Houa Phane	18,100	1,100	2,300	34,800	268,900
Khammouane	64,400	11,800	300	47,300	396,700
Luang Prabang	50,700	14,200	8,200	141,500	1,152,000
Sayaboury	24,900	2,800	1,500	18,800	306,200
Xieng Kouang	24,600	14,500	4,400	46,800	266,800
Vientiane	68,600	30,700	400	34,000	193,100
Totals	519,700	217,400	24,900	491,700	3,573,500

Source: Annuaire Statistique du Laos Quatrieme Volume 1957-59 (Direction de la Statistique, Ministere de l'Economie Nationale Royaume du Laos, Vientiane, Laos, 1961).

Economically speaking, the forests in Laos vary greatly. They encompass all kinds of tropical forests from the thick virgin forests to the mixed forests with relatively good value to the less densely timbered forests. The repartition of the types of forests in Laos is presented in Table 5.

TABLE 5. TYPES OF FORESTS IN LAOS.

Types of Forests	Area (hectares)[22]
"Fire climax type"	9,000,000
Semi-dense forest (mixed deciduous)	2,500,000
Dense forest	2,500,000
Conifer	1,000,000

Due to forest fires from year to year, the "fire climax type" areas have been considered non-economical; however, an intrinsic part of the development of the national economy hinges on making these vast areas productive by reforesting parts of them and reclaiming other areas for crop production.

Both the coniferous and broadleaf timber types are widespread all over the country. The former tends to occupy the higher elevation. The forest lands of the plains, terraces, and lower foothills up to 1,800 feet above sea

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[22] Ibid.

level, belong to the tropical zone of predominately native species.

There have been reports of a vast teak forest in the surrounding area of Parklay (Province of Sayaboury), covering a total area of 600,000 hectares.[23] Commercially exploited teak wood in the past was as in Table 6.

TABLE 6. COMMERCIALLY EXPLOITED TEAK WOOD FROM 1949 to 1959

Years	Teak wood delivered to the factories
1949	13,720 cubic meters
1955	29,000 cubic meters
1956	32,000 cubic meters
1958	40,000 cubic meters
1959	29,000 cubic meters

Besides teak wood, other hardwoods of excellent quality were exploited in 1958-59 as shown in Table 7.

The figures seem to indicate that the timber supply is more than adequate for local needs and for export. A closer look shows that the misuse and mismanagement of forest areas and the practice of "rays" (slash-and-burn) on the steep hillsides in northern Laos, have caused destruction of valuable timber land.

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[23] Ibid., p. 16.

TABLE 7. COMMERCIALLY EXPLOITED HARDWOODS IN 1958-59.

Types of wood	Quantity exploited
May Ka-Nhoung (Dalbergia Cochinchininsis)	140 cubic meters
May Dou (Pterocarfus Macrocarfus)	2,200 cubic meters
May Kha (Pahudia Cochinchininsis)	420 cubic meters
May Nhang (Dipterocarfus Alatus)	6,125 cubic meters
May Khene (Hopea)	13,000 cubic meters
May Sydeng	1,100 cubic meters
May Back (Anisoptera Robusta)	2,100 cubic meters
May Mao (Parashorea Stellata)	1,000 cubic meters
May Deng (Xhya Kerrii)	750 cubic meters
May Chick Dong (Vatica Astrot Icha)	900 cubic meters
May Sabeng (Dipteracarfus Intricatus)	660 cubic meters
May Sat (Dipteracarfus obtusifilius)	750 cubic meters

Fishery

The most important source of protein in the Laotian diet is from fish. Since Laos has no access to the sea, the Mekong River and its tributaries are the main source of supply. There is a definite indication of a need for increased fish production to suppliment domestic food supplies.

In recent years there has been a widely-practiced procedure in all parts of the country to build fish ponds. Mouthbreeder (Tilapia) and carp have been stocked in these ponds and seem to do very well. In addition, there are feasible indications that the mouthbreeder could be raised in the

rice paddies during the rainy season.

Augmented fish yields would help to raise the average diet toward more adequate standards of protein intake and improve the variety of ordinary menues for the mass rural villagers.

Farm Population and Farm Living Factors

As has been repeatedly mentioned in the first chapters of this study, Laos is a land of extensive agricultural activities with ninety-three per cent of its population living in the rural areas. The final part of this chapter will examine how this mass population lives.

From literature and from this writer's personal experience, farm living conditions in Laos are far from satisfactory. In 1961 when this writer lived in Laos, farm facilities were as follows:

Farm communities with electricity .....none
Farm communities with telephones.....none
Farm communities with running water.....none
Farm communities with casing wells.....very few
Farm communities on hard surface or gravel roads.....few
Farm communities with dispensaries.....very few
Farm communities with doctors.....none
Farm communities with hospitals.....none
Farm dwellings with inside toilets.....none
Farm dwellings with outside toilets.....few
Farm communities with markets.....few

Farm communities with junior high schools.....none

Farm communities with senior high schools.....none

Up to 1961, of all the farms in the nation, no dwellings were lighted by electricity, a few had kerosene lamps and the majority of farm dwellings used torches of benzoin for light. There were neither doctors nor hospitals in the rural areas; a few dispensaries were located in the market towns with a male nurse in charge of distributing standard medicine.[24] Indoor toilet facilities existed only in the provincial capitals and in some market towns. Running water and telephones were, for the most part, never heard of in the rural areas. For a village to build a casing well at its own expense was considered luxury spending.

As far as can be determined, farm facility conditions have not changed noticeably in the past five years. It seems that improving farm living facilities in Laos is not a problem involving increase of farm income alone, but one also involving an increase in education. The people must be made aware and convinced, through education and example, of the benefits that improved facilities can bring to their lives.

Summary

Natural resources in Laos are quite abundant, but most of them have been misused or unexploited. Soil fertility is washed away because the Laotian farmer has little knowledge

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[24]See Appendix III.

of proper cultivation methods, crop rotation planning, or use of fertilizers. Innumerable rivers and streams offer potential as irrigation facilities and for hydraulic power. Vast "fire climax type" forest areas, vital to the economic development of Laos, remain unproductive.

Rice is the staple farm crop in the country, its production exceeding all other farm commodities in value of total yearly production. Maize is an important second crop. Fruits and vegetables of many varieties are cultivated in every province, and yet the Laotian government has spent tens of millions of kips annually importing farm products from neighboring nations.

Production per unit area of most farm crops is very low in comparison with other Asian countries. Considerable fluctuation from year to year in crop production is due in part to natural calamities such as drought, floods, insect pests, and disease. Yet production could be increased if the farmers were shown better ways of cultivating, irrigating, and fertilizing the land and if improved varieties of plants and seeds were introduced. Not only would crop production for national consumption be raised, but existing crops of coffee, tobacco, pineapple, and others could be greatly expanded for export.

Animal husbandry is often a multi-purpose endeavor for the Laotian farmer. Oxen and water buffalo are raised for labor, meat, and income. Poultry and hog raising are widespread; dairy farming is practically non-existent. Improved

stock, disease control, proper feeding, better pasture land, and veterinary assistance need to be provided to make livestock raising successful in Laos.

The main source of protein in the daily diet of the Laotian people is from fish. Although projects are underway to increase fish production to supplement domestic food supplies, others need to be implemented.

Laos is one of the most richly forested areas in South-East Asia. Teak and other hardwoods of excellent quality have been exploited for export. Forest fires from year to year have rendered vast areas unproductive. Definite economic benefits to Laos could be gained if these areas were reforested and reclaimed for other crop production.

Ninety-three per cent of the population of the country is rural. Despite great diversity, most rural families share certain common concerns. They live in more isolated, sparsely populated areas where the level of income and educational attainment is low. Improving existing farm living conditions is a complex problem involving education as well as raising the farm income.

CHAPTER V

THE STRUCTURE OF THE EDUCATIONAL SYSTEM IN LAOS

The History of Laotian Education

According to Laotian tradition, every boy is expected to spend at least a few weeks as a novice in a pagoda to learn the elements of religion and conduct accepted by society. During this period of time, quite a few boys are also taught to read and write by the Buddhist monks. For many years these were the only "schools" in the country.

The history of Laotian education falls into two definite periods separated roughly by the year 1900.[1] Up until the twentieth century, the Buddhist monks were accepted as the sole repositories of all the forms of knowledge constituting the intellectual heritage of the people. The second period of Laotian education began in May, 1905 when the first Franco-Lao school was established at Vientiane, offering class instruction up to the third grade. It was not until 1921 that Laos had its first "Group Scolaire". However, the teaching staffs during that time were principally

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[1] Somlith Pathammavong. Compulsory Education in Cambodia, Laos, and Vietnam (UNESCO, New York, 1955).

French "instituteurs" and "institutrices" (elementary school masters) with the assistance of some Annamite (Vietnamese) masters.

The first four-year junior high school opened its doors in Vientiane in 1924. By 1947 three other junior high schools had been established at Pakse, Savannakhet, and Luang Prabang respectively.[2]

Although the junior high school at Vientiane was elevated to senior high school in 1949, it was not until 1952 that it was authorized by French authorities to grant diplomas to its first two high school graduates.

Higher education is possible only outside of the country. Generally speaking, the future is ceilingless for high school graduates because there are many national and international scholarships and grants available for those who are able to earn a high school diploma.

During the French occupation, education in Laos served a double purpose for the French. In the first place, inspired by the French ideals of civilization, education was viewed as the means for providing a Laotian "elite" to whom the French could look for assistance in the field of administration or in that of colonial economic development. Secondly, the French realized that the universal adoption of the French language as the medium of instruction at the

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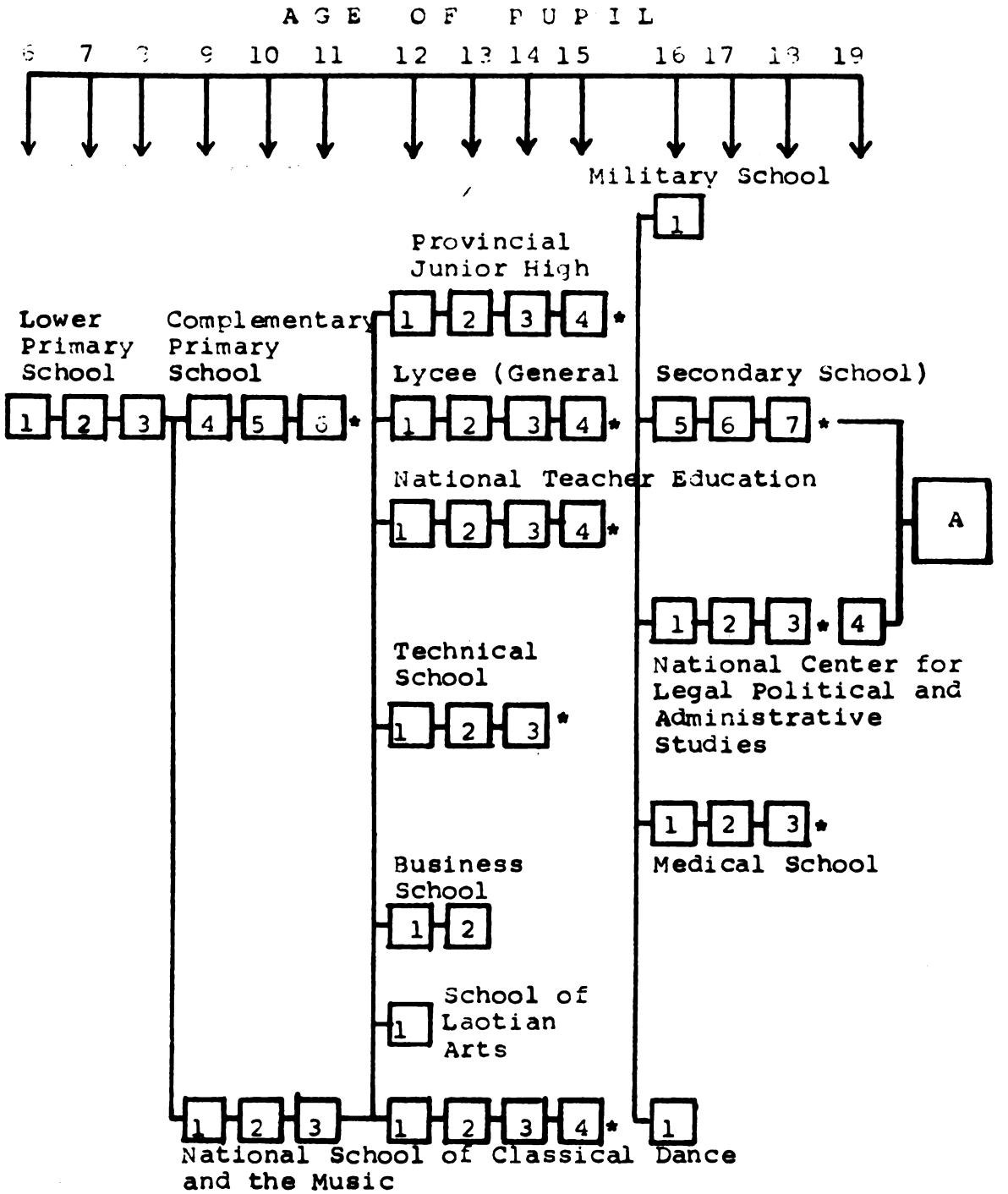
[2]World Survey of Education, Vol. III "Secondary Education," (UNESCO, New York, 1961), pp. 776-82.

earliest age was bound, in any event, to stimulate an interest in French culture. As a consequence, the French educational and cultural influence is solidly established in this land of a Million Elephants and the White Parasol. Even though Laos is now independent, the French language is the international language and a symbol of high status and high society.

The Structure of the Educational System

Following the traditional French system, educational organization in Laos is divided into three levels consisting of (1) primary, (2) secondary, and (3) higher education. Primary education is divided into the lower cycle of elementary school, three years, and the upper cycle of elementary school, three years. Secondary education consists of junior high school, four years, and senior high school, two years, plus a final year of college preparatory courses. The structure of the educational system in Laos is presented in Figure 2.

Even though schooling is free in Laos, compulsory education is only up to the third grade. Since there is a serious shortage of qualified teachers for the upper cycle of the elementary school, opportunities for pupils to go beyond the third grade are limited and highly selective. The screening procedure continues all the way through high school. As a consequence, the composition of the student body is extremely heavy at the base and very light at the top. A complete student composition in each grade is presented in Figure 3. The diagram clearly indicates the productivity of



A - Higher education institutions outside of Laos.
* - Certificate or Diploma

Figure 2. THE STRUCTURE OF THE EDUCATIONAL SYSTEM IN LAOS.

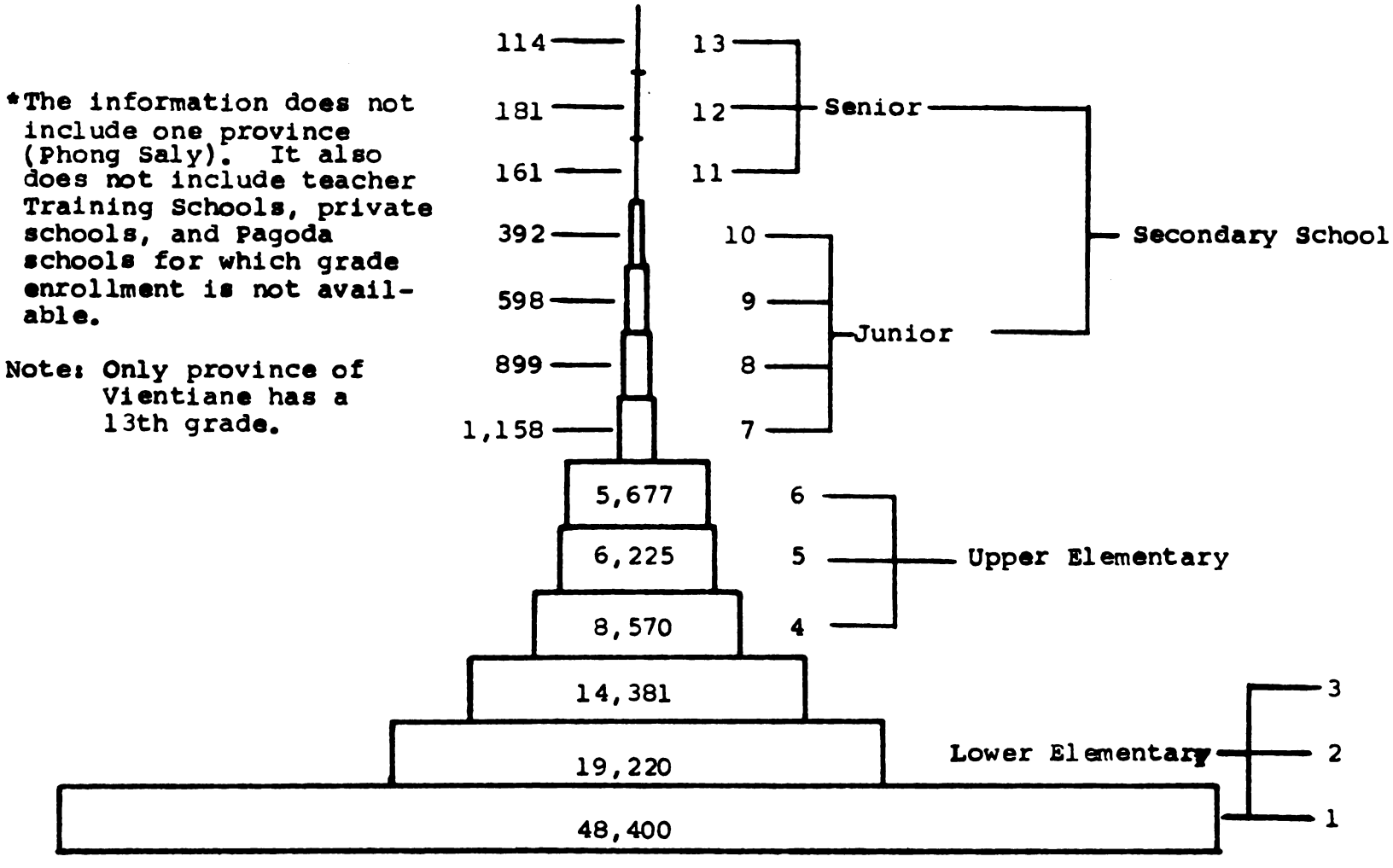


Fig. 3. SCHOOL ENROLLMENT IN LAOS BY GRADES IN 1962-63*

the Laotian educational system. The sharp contrast of student population between the sixth and seventh grades indicates that each year thousands of sixth grade graduates are dumped into the labor market without a single salable skill. For further understanding of the situation, an anatomy of the existing educational organization and its administration seems necessary.

The Pattern of Educational Administration

The Ministry of Education in Laos is structured like the French. Complete control of education by a centralized authority is seen not only in the material and physical side of the system, but also in those more intangible and spiritual spheres that deal with manners, conduct, and character, and which are so closely connected with the tone of the school.

The supreme direction of education for the country is concentrated in an all-powerful Ministry of Education. At the head of the Ministry is the Minister of Education, a member of the Royal Government's Cabinet of Ministers. He is a political appointee, usually not a trained educator, and his tenure of office is dependent upon the fortunes of his political party. As in the French system, the Minister has exceedingly wide power.

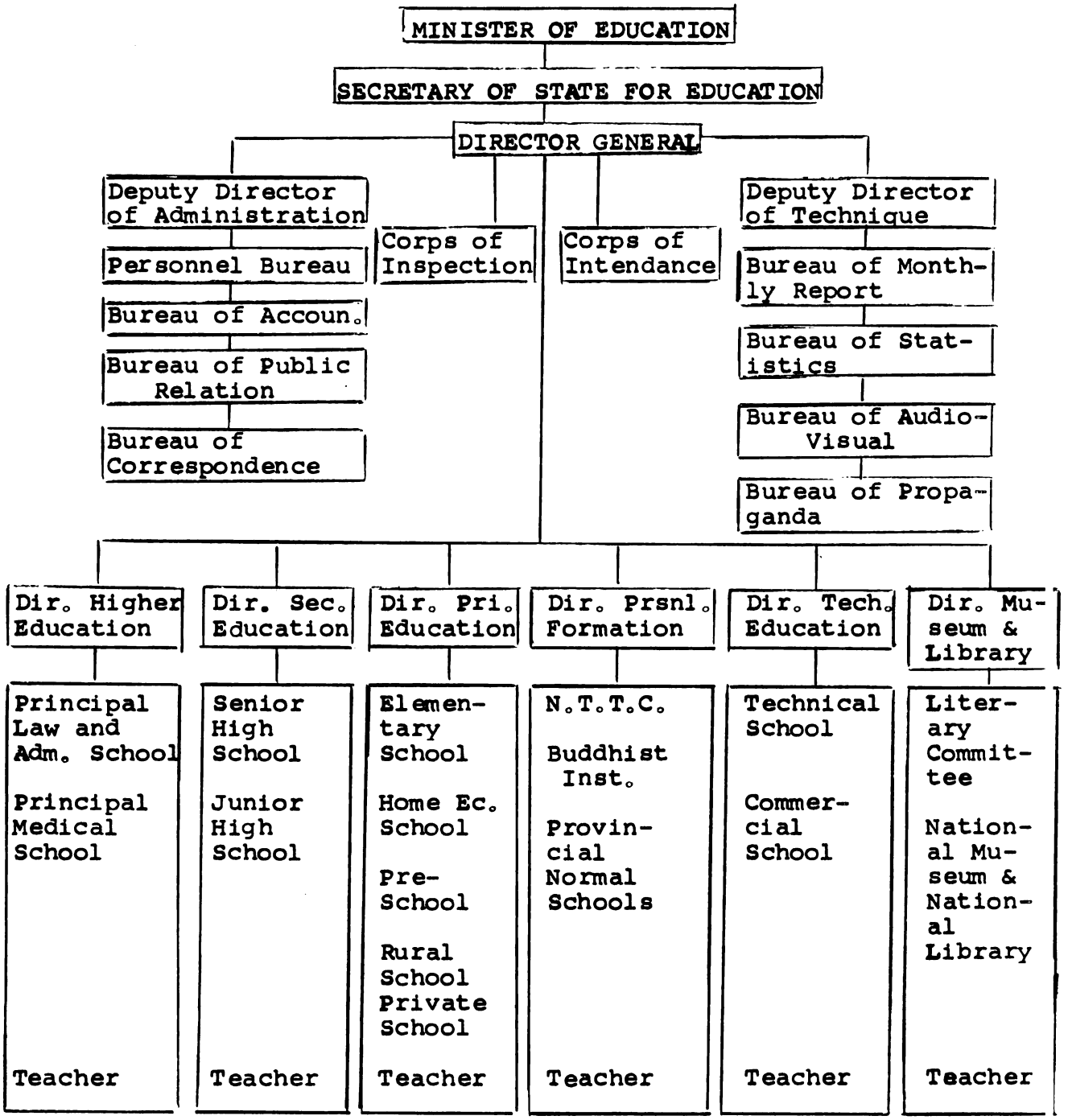
Beginning at the top with the Minister and going down the ladder there is a bureaucracy of officials with descending and diminishing powers closely paralleling the French administrative framework. Next to the Minister is the

Secretary of State for Education. Falling into the same category with his superior, he is a political appointee and not a trained educator. Next in line is the Director General who is supposed to be an expert, the authority, and the most knowledgeable educator in the country. He is not a political appointee and his tenure depends upon his performance ability. On the next lower rung are the directors of the various grand-divisions of the Ministry (Figure 4). Following them are the inspectors, the connecting links between the central office and the schools scattered throughout the country. Next are the head masters of the schools, and finally, the teachers.

In the United States there is a single-track school system with its unique common school for all classes of society. In Europe, specifically in France, there is a double-track system with its elementary schools (grades one through six) for the masses and its secondary and higher schools for the privileged classes. In Laos, because of its mutated aberration, a triploid or a triple-track system prevails, with its lower cycle of the elementary program for the mass rural folk, its upper cycle of the elementary program for the well-to-do middle class, while secondary school is reserved for the privileged "elite".

Laotian educational administration has all the characteristic features inherent in centralization. A trained bureaucracy located at Vientiane has dictated a standardized and uniform educational policy for the entire country. Therefore, every school is very much like every other school

Fig. 4: ORGANIZATION OF THE MINISTRY OF EDUCATION



Source: Royaume du Laos, Ministere de l'Education, Nationale Rapport Statistique (1963-64), Vientiane, Laos.

in the same category, with some slight differences in the efficiency with which they prepare their students for the annual national examinations. In fact, these examinations have dominated the educational processes of the schools and turned them into machines. The examinations have acquired this power over the system because they lead the way to the coveted national certificates, which in turn open the way to government posts and to higher education.

The first national examination is given at the end of the third year of schooling. Those who pass the examination qualify for admission to the upper cycle of elementary school (if there is enough room). The second national examination is given at the end of the sixth year of schooling. Those who pass this examination earn a diploma called "Certificat des Etudes Primaires". However, in order to be admitted to study in secondary school, students must pass an entrance examination which is very competitive.

As has been pointed out, the most outstanding feature of the administration of education in Laos is its excessive centralization in the Ministry of Education at Vientiane. But oddly enough, this supreme direction of education for the country by the all-powerful Ministry of Education does not cover secondary education. This happens because there are no qualified Laotian teachers or inspectors at the secondary school level. French teachers are inspected by the competent French Services, in accordance with Article IV, 4, of the Franco-Laotian Convention on Education.[3]

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[3]UNESCO (1961), Ibid.

Up to this point, the context of this study might have at least partially explained the broad base of the primary grades and the needle-like spire of the secondary school student population pyramid. In the succeeding section, this writer wishes to explore the problems facing the elementary schools in Laos today.

Primary Education

A Laotian child is required by law to start school at the age of six and is expected to complete the basic three-year course of the lower cycle of the elementary school.[4] He stays in each of the three grades until he can pass a standard government examination. In the rural elementary schools where teaching skills and student interest levels are frequently poor, some pupils may have to spend two years in a grade. If a student cannot pass the standard government examination by the third year in any one grade, he is no longer permitted to remain in the school.

The elementary course of study is prescribed by the Ministry of Education in Vientiane, which prepares all textbooks as well as all examinations which students must pass in order to move from grade to grade. Thus, the educational process in the Laotian elementary schools is characterized by slavish memorization and sterile cramming. The pupils in the elementary schools are similar to those students in the United States that John Dewey once described when he wrote

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[4]See Appendix IV.

"(they are) expected to take it (subject matter) in the doses that were prescribed from without . . . If the pupil left it instead of taking it, if he engaged in physical truancy, or in the mental truancy of mind-wandering and finally built up an emotional revulsion against the subject, he was held to be at fault. No question was raised as to whether the trouble might not lie in the subject matter or in the way in which it was offered."[5] In addition, pupils are bound to strict school rules which restrain physical and intellectual freedom. The typical Laotian school room is arranged with fixed benches in rows and pupils are permitted to leave their seats only when the school master indicates.

Because of the regimented, formal atmosphere of the classroom and the continual emphasis upon memorization, Laotian elementary pupils tend to learn by rote rather than assimilating subject matter by observation and reflective thinking. This memorization learning process continues because the present elementary school masters, who were educated this way during their formative years, encountered even more rigid and formalized instruction at the normal school where they received their teacher training.

As has been emphasized, the great bulk of the Laotian population is made up of peasants who are engaged in farming,

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[5]John Dewey. Experience and Education, The Kappa Delta Phi Lecture Series (The MacMillan Company, New York, 1952), p. 46.

and this vast peasant population is marked by illiteracy, superstition, low standards of living, and ignorance of the fundamental rules of hygiene and sanitation. After the Second World War when France began to be aware of movements within Laos for independence, she was forced to recognize that something had to be done to quiet these rumblings for independence. As a result, some schools were set-up in the rural areas. However, national literacy was not raised to any great extent and the situation of the peasantry was not changed much.

After independence in 1954, the Royal Laotian Government became increasingly aware of the problems resulting from this state of affairs and realized that the first line of attack had to be reducing national illiteracy. An all-out program was launched by the Ministry of Education with technical and financial assistance from the United Nations, America, and the French Cultural-Economic Mission. It is hoped that in the very near future every Laotian child between the ages of six and twelve will be able to attend elementary school and that both the individual children and the entire nation will benefit from the advantages this education will bring. Naturally, such a large scheme has met with difficulties, but the first steps have been taken. Authorities have steadily advanced the program by securing more buildings, printing additional textbooks, training more teachers, and expanding the three-year elementary schools to comprehensive six-year elementary schools whenever possible.

In the past decade, primary education in Laos has been making steady progress.

In 1946 there were 187 elementary schools in Laos; by 1953 the number had grown to 852; and by 1963 there were 2,232 elementary schools in the country.[6] The number of elementary schools in the past twenty-two years has increased on an average of ninety-eight per year over the preceeding twenty-two years. In 1962 alone, 550 new schools were established in that single year (Figure 5). If the average increase continues, as pointed out by Little, there will be 3,212 elementary schools in 1973.[7]

Similar trends have also occurred in student enrollment. In 1946 there were 14,700 pupils; in 1953, 41,412; and in 1963 there were 121,053 pupils in the public elementary schools (Figure 6). As a consequence, this has thrown upon the Ministry of Education the huge task of training more prospective teachers and building more new schools to match the trend and keep the promise of education for all. However, this is not the whole picture. The task before the authorities is even greater as can be seen from the fact that the number of children between the ages of six and twelve, eligible for elementary school, as estimated by the National Bureau of Statistics in 1959, is approximately 400,000.[8]

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[6]Harry A. Little. Information on Schools of Laos 1963 (USAID/Laos, October, 1963), Memio, p. 3.

[7]Ibid.

[8]See Appendix V.

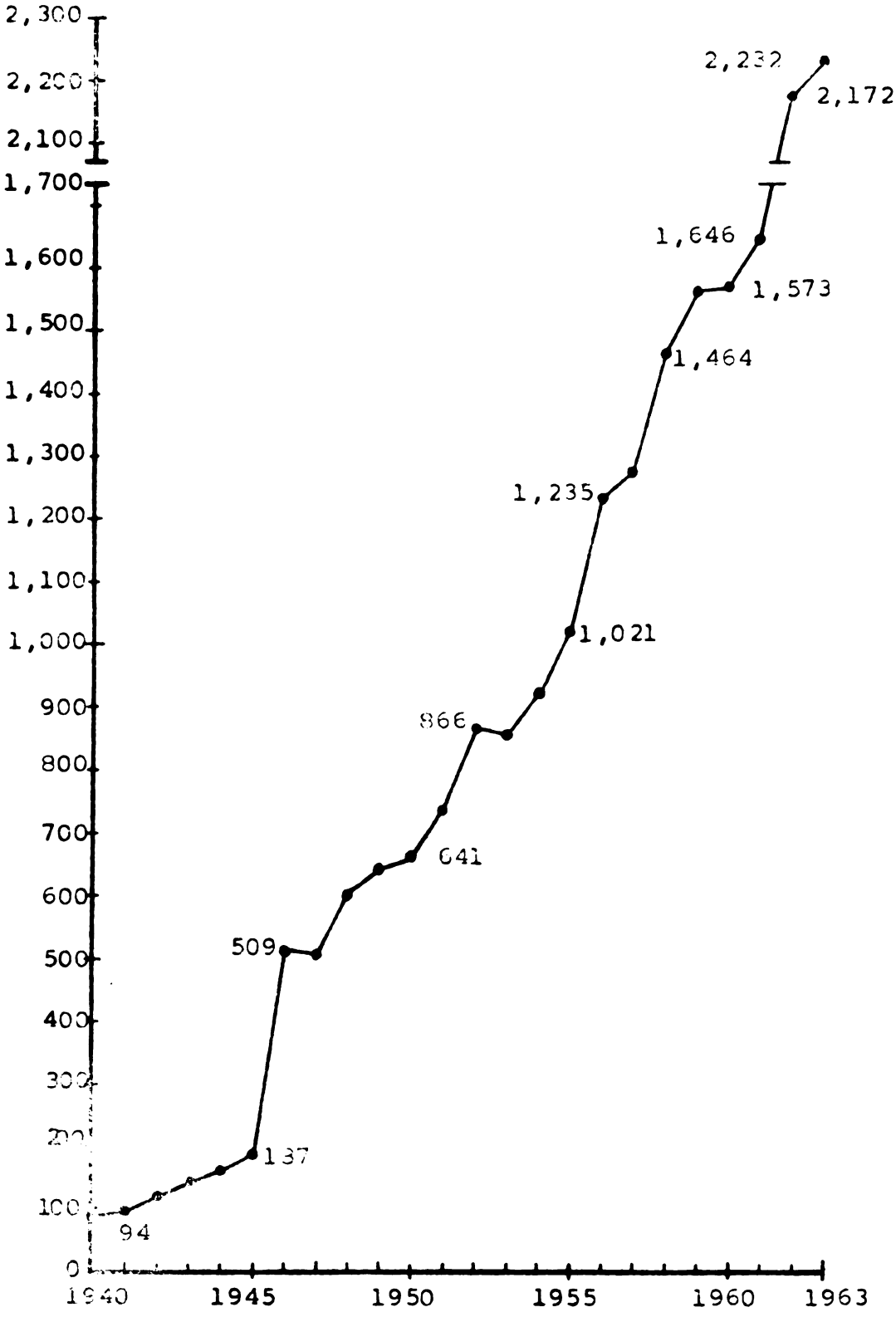

Figure 5. NUMBER OF ELEMENTARY SCHOOLS (1940-1963). (Compiled by Harry A. Little, USAID/LAOS from the report of Khamphao Phonekeo).

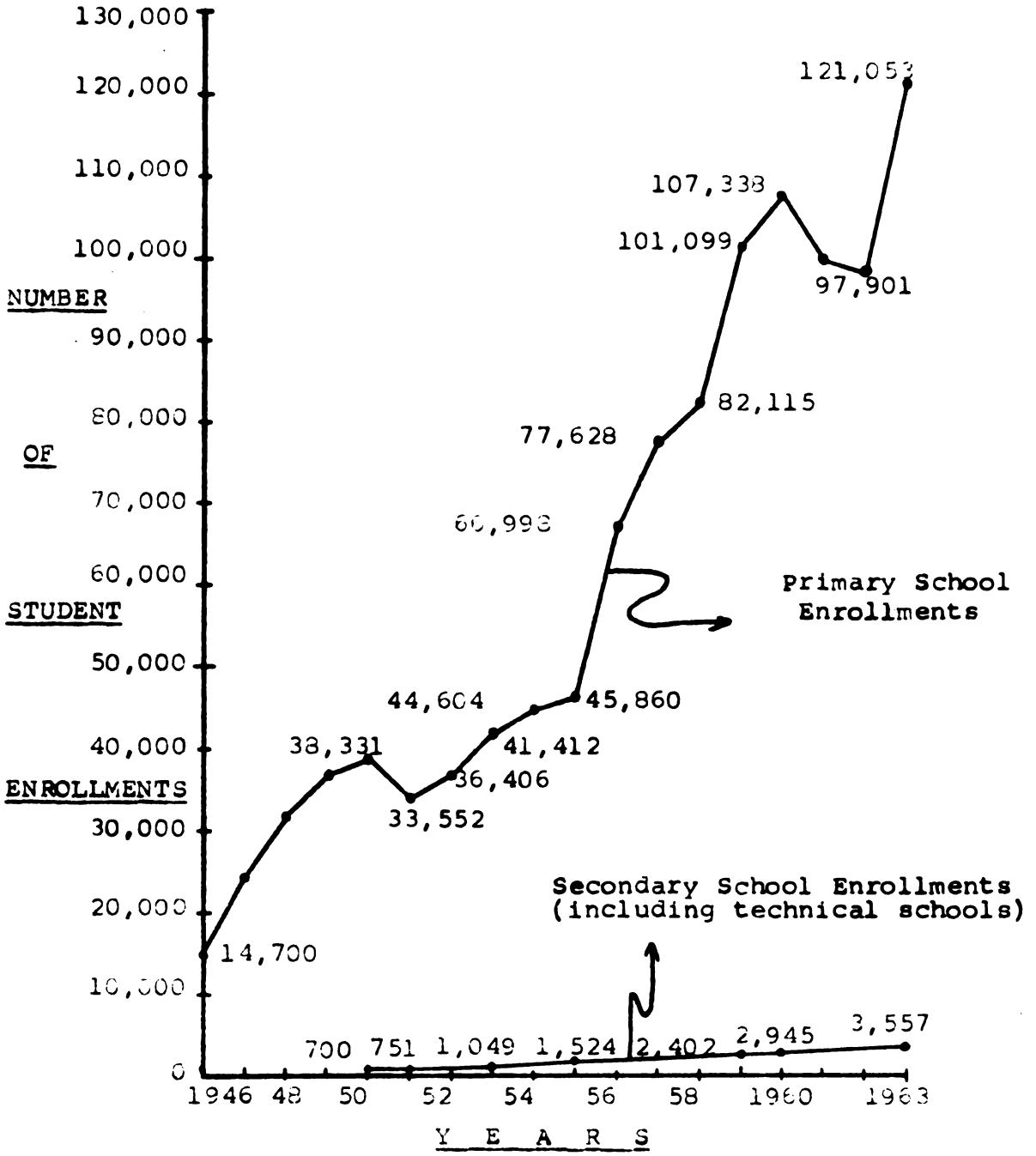

Figure 6. NUMBER OF STUDENTS ENROLLED IN ELEMENTARY AND SECONDARY SCHOOLS IN LAOS.
(Compiled by author from various statistique reports of the Royal Laotian Government).

Therefore, the gigantic task confronting the Ministry of Education still lies ahead.

Secondary Education

As has been pointed out earlier in this chapter, the first four-year junior high school was opened in Vientiane in 1924. However, up until 1945, this was the only junior high school in the nation. Furthermore, it was restricted by the French professors to no more than 200 Laotian students in the entire school. As for those who wanted to go beyond junior high school, they had to attend classes in one of the secondary schools in Saigon, Hanoi, or Phnom Penh.

Secondary education is one of the most significant educational problems facing the nation today. By 1964 there were only four junior high schools in the country and three senior high schools. Classrooms are crowded and more than ten times as many students apply for entrance as can be accepted. Unlike the elementary schools over which the Ministry of Education has exceeding power, in the secondary schools it is the French professors who make the policy and run the schools because there are no qualified Laotian teachers nor inspectors at the secondary level. Textbooks used in the secondary schools are originally prepared for French high school students in France. Naturally, French is the official language of instruction.

In order to enter secondary school, a student, upon completion of his sixth year of schooling, must pass a series of difficult examinations prepared by the French professors.

Then each year the student must again take an examination to determine whether or not he is able to go on to the next grade. If he fails his examination the second time at any grade level, he is automatically out of the school. Therefore, only the ablest students finish, for the examinations take their toll.

The majority of high school students at the present time have been born and raised in the provincial or national capital in which the school is located. While completion of high school education is difficult enough for these students, for a rural pupil to finish high school in Laos is like a dream come true. The hurdles he has to overcome before being awarded his diploma are many. For example, the student who comes from the rural area must find living quarters in the capital city where his high school is located. This is an expense he often cannot afford. Secondly, since it is unlikely that his parents have had any high school training, it is almost impossible for them to appreciate its value and to encourage their child to complete high school education. Thirdly, because the secondary school subject matter is mostly, if not completely, removed from anything the student has ever encountered in his experiences in everyday life, it is very difficult for him to assimilate the subject matter.

The screening process for secondary education in Laos is highly selective. In 1952, only 50 out of 210 applicants were accepted after the exhaustive examination. In 1955, 80 students out of 527 candidates were admitted to secondary

school.[9] In 1962-63, 3,130 pupils took the examination for entrance into secondary school and only 205 (31.6%) were actually admitted to the class.[10] The secondary school enrollment for the years 1950 to 1961 is presented in Table 8. By 1964 the total enrollment in secondary school including technical stream students was 4,235 pupils.[11]

To illustrate the points presented pertaining to junior and senior high school graduates, the total number of graduates each year from 1950 to 1963 is given in Table 9.

Technical Education

In addition to the general or academic secondary schools there are two technical schools at the junior high level; one is located in Vientiane, the other in Savannakhet.

Technical education in Laos can be traced back before the arrival of the French in 1886 to when the Buddhist monks conducted schools to develop skills and knowledge necessary for successful participation in the traditional Laos village society. These monks represented the highest human virtues and were traditionally regarded as the best teachers boys could have. Though the schools placed strong emphasis upon religious and moral training--discipline, respect for

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[9]Writer summarized from the report of "Historique et Development des Establissements d'Enseignement Secondaire du Royaume du Laos" (Ministere de l'Education Nationale, Vientiane, 1962), Memio, p. 40.

[10]Little, Ibid., p. 3.

[11]"Rapport Statistique", Annee Scolaire 1963-64 (Ministere de l'Education Nationale, Vientiane, Laos).

TABLE 8. SECONDARY EDUCATION ENROLLMENT FROM 1950-61*.

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Lycee Pavie	378	473	528	573	573	558	661	823	1,009	1,178	1,226	1,250
Savan-nakhet	109	102	118	155	157	204	256	270	273	281	335	422
Luang Prabang	110	101	74	114	123	143	189	185	189	275	348	389
Pakse	117	120	130	154	165	185	203	268	255	301	360	350
Kham Muane						113	117	160	164	183	186	174
Total	714	888	894	1,090	1,058	1,192	1,524	1,763	2,092	2,503	2,742	2,917

*Not including technical stream students

Source: Writer compiled from "Histoirique et Development des Etablissements d'Enseignement Secondaire du Royaume de Laos," (Ministere de l'Education Nationale, Vientiane, Laos, 1962), p. 40

TABLE 9. GRADUATES FROM JUNIOR AND SENIOR HIGH SCHOOLS IN LAOS FROM 1950-63.

	Junior graduates (National Title)				
Year	Vien-tiane	Savan-nakhet	Luang Prabang	Pakse	Kham Muane
1950					
1951	69		7		
1952	61		8	7/21	
1953	122		11	11/24	
1954	102		8	19/41	
1955	109		10	14/36	
1956	120		11	19/40	
1957	98		18	14/22	8
1958	99		16	18/36	20
1959	156		15	14/33	10/19
1960	89		33	43/79	20/45
1961	100	41	22	32/71	13/43
1962	105/322*	22/42	23/39	28/37	16/28
1963	107/264	15/54	16/54	20/49	13/28

	Junior graduates (French Title)					12 Gr.	13 Gr.
Year	Vien-tiane	Savan-nakhet	Luang Prabang	Pakse	Kham Muane	Vien-tiane	Vien-tiane
1950	7					1	
1951	24		3			5	
1952	23		5	9/18		7	2
1953	29		7	10/31		23	6
1954	44		6	21/46		27	3
1955	44		3	11/34		41	18
1956	34		8	10/21		20	27
1957	44		13	12/19	9		
1958	74		10	15/34		45	25
1959	97		9	7/36	7/19	28	24
1960	131		22	43/70	20/31	77	31
1961	101	34	20	23/49	11/27	60	26
1962	148/279		24/40	30/35	17/26	66/125	34/78
1963	167/292	29/53	27/54	35/52	23/26	112/223	79/117

*Means that out of 322 students who took examination, 105 passed.

Source: Writer compiled from (1) "Histoirique et Development des Etablissements d'Enseignement Secondaire du Royaume du Laos," (1962); and (2) "Rapport Statistique," Annee Scolaire 1963-64 (Ministere de l'Education Nationale, Laos).

elders, reverence for Buddha and the king; manual arts were taught as well. Boys learned how to construct the notched roofing on pagodas and how to build the imposing temple walls made of fire-proof bricks put together with an extra-ordinary hard mortar. Wood carving and painting were taught, examples of which can still be seen in the temples today. Outside of the pagodas silver and gold smithing were taught by apprenticeship.

Unfortunately, after the arrival of the French, these phases of manual art training began to fade away from the monastic schools. Today the only traditional handicrafts still being taught appear to be those involving silver and gold works.

According to a report by UNESCO,[12] under the French system of education, technical education in Laos was in existence as early as 1923 when an informal apprenticeship school was established in Vientiane, but it did not make much progress. In 1938 this school came to be known formally as "Atelier Ecole" (workshop school), but still it did not attract the more able youth. It never went beyond training craftsmen in the so-called accelerated one-year course. In 1947 a skilled Laotian craftsman was employed by the elementary school authorities at Khong (southern part of Laos) to establish a workshop school to train about thirty young people for a revival of the silversmith's craft. The same

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[12]UNESCO (1961), Ibid., p. 778.

year a weavers' school at Pakse, conducted by Madame Blanchard de la Brosse, assembled fourteen young girls for instruction in the art of weaving many long-forgotten designs and the intricacy of lame work. These two schools were open for about five years.

A third "Atelier Ecole" was established in 1947 in Savannakhet in the central part of Laos, and six years later, in 1953, the Vientiane workshop school was converted into a technical school. It was not until 1958 that both the Vientiane and the Savannakhet technical schools finally came to be recognized as parts of the respective high schools in those cities.

Today both technical sections of the Vientiane and Savannakhet high schools offer a three-year course of study in which a considerable portion of the pupil's time is spent in the workshops. The Savannakhet technical high school prepares pupils for three special fields: electricity, cabinet making and carpentry, and automobile mechanics. The Vientiane school offers courses of study in these same three areas and also courses in masonry and building, general mechanics, and business education.

As Wulff[13] pointed out in 1958, the Royal Government was fully conscious of its responsibilities toward its youth and asked UNESCO for an expert to reorganize technical

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[13] H. E. Wulff. "Laos Develops Education for Technology," Hemisphere (February, 1958), Vol. 2, No. 2, pp. 3-7.

education and to establish a series of technical schools in the country to attract young men. Yet the youth of the capital cities still find it more attractive to get clerical work in the rapidly-growing administrative offices or to attend the academic courses at the high schools. This trend of student enrollment in the technical section and the academic section of the high school is illustrated in Table 10.

TABLE 10. SECONDARY STUDENT POPULATION BY STREAM (1962-63)[14]

Stream	No. of Students	Per cent
General	3,118	89.2
Technical	294	8.3
Commercial	89	2.5

While a beginning has been made to establish vocational education in the country, it is only that--a beginning. No courses in vocational agriculture are offered at either of the two junior high technical schools, nor at any other school in the country for that matter. Yet Laos is predominately an agricultural nation. There is much to be done.

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[14] Rentree Scolaire 1962-63, (Raport Generale, Direction Generale de l'Education, Ministere de l'Education Nationale, Vientiane Laos, 1964), pp. 1-6.

Ecole Superieure de Pedagogie
(The National Teacher Training Center)

History of Normal School

Since 1886, the arrival of the French as protectorate over Laos,[15] relatively few efforts were made by the French to bring about improvement in elementary school teacher training for teachers of local nationality. From 1922 to 1942 native elementary school teachers were trained for one year or less at certain demonstration schools in the country. In 1942 a two-year training course was established, but it was not until 1947 that the first normal school, "Ecole Normal," was founded in Vientiane. The object of the "Ecole Normal", as stated by the Director General of Education, was to train prospective teachers for the "Group Scolaire".[16]

As the enrollment in the elementary schools sky-rocketed after independence, the available facilities at the normal school were no longer sufficient to train prospective teachers to meet the demand. In February, 1958, construction was started on the new normal school campus at Dong-Dok on the outskirts of Vientiane. During the ground-breaking ceremony, the Minister of Education addressed this remark to the crowd: ". . . The fundamental goal of the new normal school is to bring to children of the remote villages the

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[15] J. S. Furnivall. Educational Progress in Southeast Asia (Institute of Pacific Relation, New York, 1943), p. 38.

[16] Tay Keoluangkot. "Modern Education," Kingdom of Laos (France-Asie Press, Paris, 1959), p. 445.

knowledge which will enable them to escape from the vicious circle of ignorance, of illness, and of poverty . . . ."[17]

In October, 1960, part of the building facilities at the new campus were completed and the old "Ecole Normal" was then transferred to Dong-Dok and renamed the National Teacher Training Center (hereafter will be referred to as NTTC).

Besides the NTTC, two other regional normal schools were founded at Pakse, the provincial capital of Champassak in the south, and at Luang Prabang, the provincial capital of Luang Prabang in the north.

The Training Courses

From 1947 to 1955, "Ecole Normal" at Vientiane offered two kinds of training programs:

1. A one-year accelerated course which would qualify students to teach in grades one through three.
2. A two-year training program which would qualify graduates to teach in grades four through six in the "Group Scolaire".

Students who were at least eighteen years of age and who had completed six years of elementary school were recruited for both of these programs.[18]

At the present time, training courses offered at the NTTC and at the two regional normal schools are as follows:

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[17]Unpublished file of the Laos Desk (Department of State, Washington, D.C., 1964).

[18]Lao Desk (U.S. State Dept.), Ibid., pp. 3-4.

1. The One-year Program

This is an accelerated course which qualifies the students to teach in grades one through three in the village schools. They agree that upon completion of their training course, they will teach for at least five years wherever the Ministry of Education assigns them.

2. The Four-year Program

This program is the mutation and extension of the two-year program at "Ecole Normal" mentioned previously. It is the principal training course at the NTTC. Upon graduation, students have the equivalence of a tenth grade education and are qualified to teach in grades four through six in the elementary schools and sometimes in grades seven and eight in the secondary schools.

3. The Three-year Program

This program was added to the curriculum at the NTTC in September of 1963 and is the highest level of teacher training presently available in Laos. Students enter this program after the tenth year in regular secondary school or upon completion of the four-year program at NTTC. This program, which is in either Arts or Sciences, qualifies graduates to teach in the seventh, eighth, ninth, and tenth grades of the secondary schools.

4. The English Section

The students in this course of study graduate at the same level and have the same qualifications as the students in the three-year program, but in most cases, they are recruited after completion of the eighth grade and receive a

total of five years of training.

The Curriculum at NTTC

Except for the accelerated one-year program, most, if not all, of the four-year and the three-year programs at the NTTC are taught by French professors in French. Therefore, it is necessary for students enrolling in both of these programs to be able to master the French language in the first two years of schooling before any professional and specialized training can be effectively carried out.

The time schedules of the first two years of the four-year program offered at the NTTC are presented in the following tables: (11 and 12)

TABLE 11. FIRST YEAR TIME SCHEDULE OF FOUR-YEAR PROGRAM AT THE NATIONAL TEACHER TRAINING CENTER.

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1st	French	Lao	French	French	French	French Dictation
2nd	French Rec.	Lao	French Reading	French Rec.	French Comp.	French Grammar
3rd	Math	Religion	Math	Math	Math	Math
4th	Lao	Education(Lao)	Science & Hygiene	History	Geography	Drawing

Afternoon hours: music, physical education, youth movement, and manual work.

TABLE 12. SECOND YEAR TIME SCHEDULE OF FOUR-YEAR PROGRAM AT THE NATIONAL TEACHER TRAINING CENTER.

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	September
1st	French	French	French	French	French Dic.	Lao
2nd	French Rec.	French Reading	French Rec.	French Comp.	French Grammar	Lao
3rd	Math	Math	Math	Math	Math	Civic Action or Religion
4th	English	Science & Hygiene	History	Geography	Drawing	English

Afternoon hours: 1 hour English, 1 hour Education in Lao, music, youth movement, manual work, and home economics.

Similar time schedules of third and fourth year course work at the NTTC are presented in the following tables: (13, 14)

TABLE 13. THIRD YEAR TIME SCHEDULE OF FOUR-YEAR PROGRAM AT THE NATIONAL TEACHER TRAINING CENTER.

Subject	Hours per week
French	9
Mathematics	
High school mathematics	4
Elementary school mathematics	2
Science and Hygiene	3
History and Geography	2
English	2
Religion	1
Lao	1

Afternoon hours: Lao, youth movement - 2 hours; drawing, music, physical education, manual work, home economics, and gardening.

TABLE 14. FOURTH YEAR TIME SCHEDULE OF FOUR-YEAR PROGRAM AT THE NATIONAL TEACHER TRAINING CENTER.

Subject	Hours per week
French	9
Mathematics	
High school mathematics	4
Elementary school mathematics	2
Sciences	4
History and Geography	2
Education	2
English	1

Afternoon hours: English, 1 hour; Lao and religion, 3 hours; drawing, music, physical education, manual work, home economics, and gardening.[19]

Teaching Staff at the National Teacher Training Center

The teacher training program at the NTTC is under the direction of Mr. Souphan Blanchard de la Brosse, an official of the Lao Ministry of Education. Mr. Blanchard is assisted by two directors of studies, one Laotian and one French, and by an international teaching staff made up of thirty-seven French professors and "surveillances" (surveyors), sixteen American International Volunteer Service members (a private organization with functions similar to those of the Peace Corps), three Thai, two British, and about fifteen Laotian instructors.[20]

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[19] Ecole Superieure de Pedagogie, (Project d'organization des etudes, Annee Scolaire, 1963-64, unpublished file at National Teaching Training Center), pp. 1-14.

[20] Lao Desk (U.S. State Dept.), Ibid., pp. 6-7.

Although most of the classes in the four and three year programs are taught mainly in French by French professors, a few classes are taught in Lao by the Laotian and Thai instructors. Both the Lao and Thai instructors teach all the courses in the one-year program where classes are conducted entirely in Laotian.

In the English program, the faculty member in charge is from the South East Asia Regional English Project at the University of Michigan. He is assisted by the members of the American International Volunteer Service.

Increase in Enrollment at the National Teacher Training Center

In 1947 when the "Ecole Normal" was founded at Vientiane, the Director General of Education expressed hope that in order to satisfy the ever-increasing demands of primary education, the "Ecole Normal" would be able to provide about one hundred new teachers every year.[21]

In the past, teachers in Laos have suffered from having little prestige or hope of advancement, while correspondcivil service employees have enjoyed social prestige deriving from honorific titles or decorations bestowed by the king. Above the village level, the teaching staff has been divided into a few rigid categories with little upward mobility compared to the civil service where officials could

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[21]Tay Keoluangkot. "Primary Education," Kingdom of Laos (France-Asie Press, Paris, 1959), p. 445.

transfer from one classification to another and advance to a higher rank. In awareness of this pitfall, the Royal Government has made an attempt to make teaching an attractive career. A series of professional examinations are offered as a means of allowing teachers to rise from one rank to another. As a result, the increase in enrollment at the teacher training schools has jumped from twenty-two students in 1949-50 to 541 in 1960-61 and to 1,311 students in 1963-64. Latest reports that this writer has received from the Ministry of Education indicate that the enrollment at the National Teacher Training Center is expected to continue on an upward swing. Illustration is presented in Figure 7 and a future detailed plan for the NTTC is presented in Appendix VI.

Following the trend in enrollment, graduates from the NTTC are increasing year after year. In 1963-64, 450 students graduated from NTTC and 460 in 1964-65. By 1971, the number of graduates is expected to reach the 600 margin. (See Table 15).

According to future plans for the normal schools in Laos, it seems likely that the one-year accelerated course at both Pakse and Luang Prabang will be changed to a two-year program by 1967-68.[22] In addition, plans are already underway at the NTTC for an advanced two-year course beyond the present existing three-year junior high school teacher

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[22]See Appendix VI.

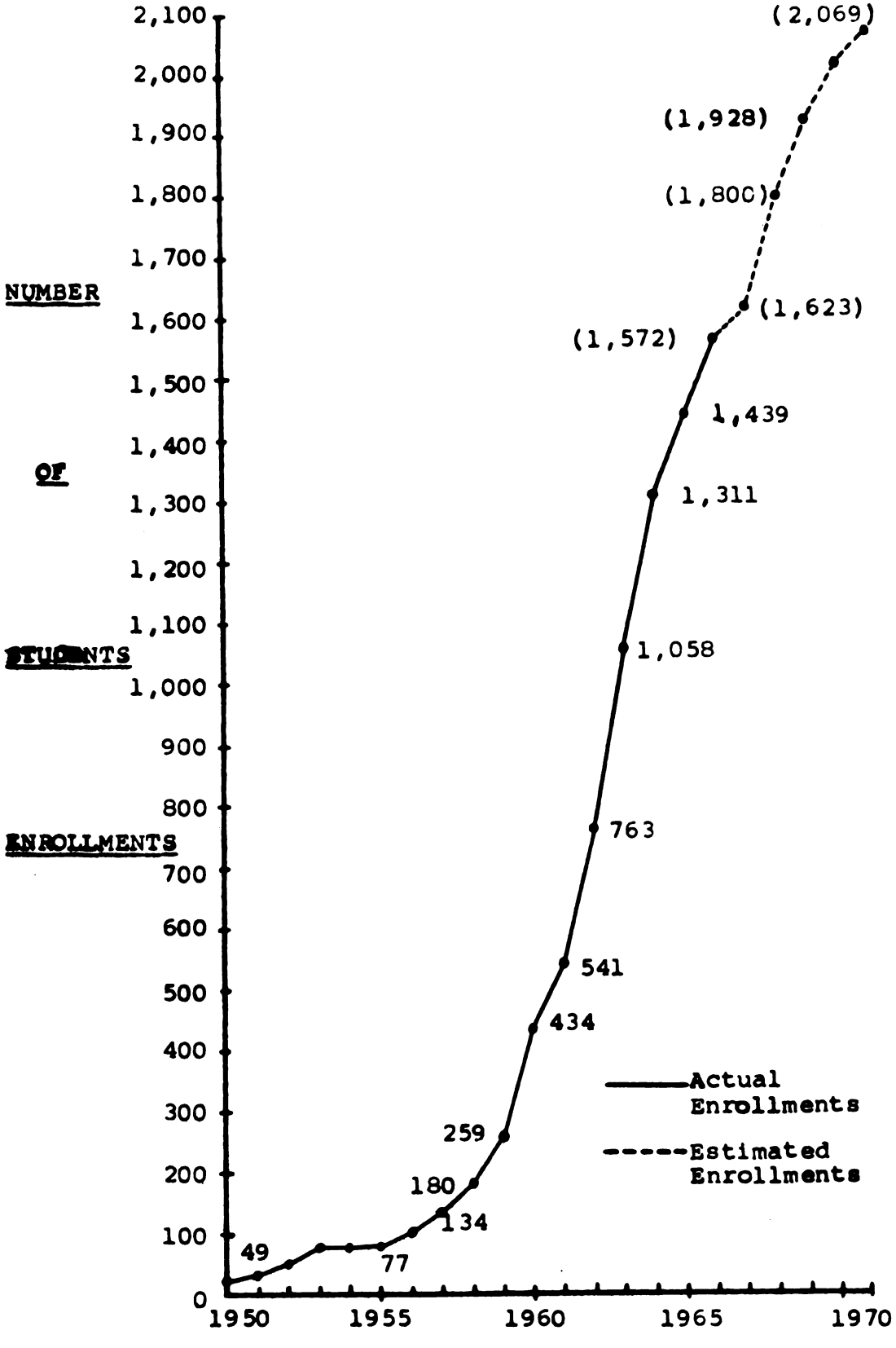

Figure 7. INCREASE IN ENROLLMENT AT THE NATIONAL TEACHER TRAINING CENTER AND ESTIMATED ENROLLMENT IN THE FUTURE.

TABLE 15. NATIONAL TEACHER TRAINING CENTER AND REGIONAL NORMAL SCHOOLS INCREASE IN ENROLLMENT. (FUTURE ENROLLMENT) ESTIMATED, GRADUATES PARTICIPATION, AND NUMBER OF GRADUATES TO TEACH IMMEDIATELY AFTER GRADUATION

Fiscal Year	NTTC			Normal School Pakse	Normal School Luang Prabang
	Enrollment	Graduates (1)	(2)		
1949-50	22				
1950-51	41				
1951-52	49				
1952-53	77				
1953-54	72				
1954-55	77				
1955-56	102				
1956-57	134				
1957-58	180				
1958-59	259				
1959-60	434				
1960-61	541				
1961-62	763				
1962-63	1,058				
1963-64	1,311	477	450	70	70
1964-65	1,439	510	460	100	100
1965-66	(1,572)*	(501)	(456)	100	100
1966-67	(1,623)	(490)	(445)	100	100
1967-68	(1,800)	(614)	(534)	( )**	( )
1968-69	(1,928)	(651)	(551)	( )	( )
1969-70	(2,017)	(682)	(582)	( )	( )
1970-71	(2,069)	(721)	(600)	( )	( )

* Estimates are given in parentheses

(1) Total number of graduates participated in that fiscal year.

(2) Total number of graduates to teach immediately.

** Program may be changed in the future.

Source: Compiled by writer from "Rapport Statistique", Ministry of National Education, Statistics Division.

training program for the fiscal year 1966-67. This program will eventually graduate students who will have the equivalence of a bachelor's degree and thus be qualified to teach in any of the secondary grades. Ambitious plans for the NTTC do not cease here; another plan is being considered to establish a three-year advanced terminal course which will grant degrees equivalent to the master's degree and thus qualify graduates to teach in the training institutions themselves. When these two programs are established and operating successfully, then, and only then, will the Royal Laotian Government be able to truly claim that the National Teacher Training Center is shouldering its responsibility in the field of teacher training.

Summary

For many centuries, religion and education went hand-in-hand in Laos. Buddhist monks were looked at by the people as the most educated persons in the country. When a Laotian boy entered a pagoda for his period of religious service, he sometimes was taught to read and write along with the Buddhist scriptures.

Public schools came into existence first in 1905 under the direction of French school masters and the subjects taught in Laotian as well as French were reading, writing, and arithmetic.

The Ministry of Education in Laos has been organized along the French plan. It is a highly centralized system, creating an all-powerful Ministry of Education, although at

the present time it does not direct the secondary level of education as there are no qualified teachers or inspectors that are Laotian at the secondary level.

The organization of public education in Laos is divided into three levels consisting of (1) primary, (2) secondary, and (3) higher education. Up to the present time, higher education is possible only outside of the country.

Primary education in Laos has made steady progress since 1946 as far as enrollment is concerned. On close-up examination, however, one discovers that its productivity and holding power are unlikely to be able to satisfy the national goal and aspiration of education for all between the ages of six and twelve. The Ministry of Education is faced with the huge task of providing more qualified teachers, more new schools and teaching materials for the thousands of children of elementary school age.

In spite of the fact that the overwhelming majority of youth who enter the primary schools never complete the upper cycle of the elementary program, to say nothing of entering and completing secondary school, the prevailing purpose of primary education to date is to provide the initial preparation required for admission to the secondary school. Despite the fact that Laos is predominantly an agricultural country, the curriculum in the elementary schools in the rural areas completely ignores agriculture and nature study; instead, the curriculum is exceedingly academic and extremely formal. This is due in part to the

demands of the national examinations for promotion which exact memorization of subject matter in place of assimilation of subject matter by observation and reflective thinking. A second contributing cause is the "we teach what and as we have been taught" attitude of the elementary teachers.

Secondary education is one of the least developed levels of education in Laos. In 1964 there were only four junior high schools and three senior high schools in the country. These schools are under the direction of French professors and are highly selective. In 1963, only three per cent of the 121,053 student population reached secondary school. It is likely that this phenomenon will continue for some years, until Laos is able to train Laotian high school teachers.

Once again, despite the fact that Laos is predominently an agricultural nation, there are no vocational agricultural courses offered at either of the two existing technical schools in the country. Part of the reason is that the authorities are accustomed to the idea of sending students to Vietnam and Cambodia for training in vocational agriculture as they used to do during the French colonial period.

In 1964-65, 460 students graduated from the NTTC. At the present time four programs of study instructed by an international teaching staff are offered there. The NTTC and the two normal schools undoubtedly have done a remarkable job thus far in training prospective teachers quantitatively and have spread a certain amount of information among them.

This is good, but in looking deeper, it seems to this writer that the NTTC and normal schools have failed to train the prospective teacher to think freely, critically, and creatively. Instead, rigidity, formality, and authoritarianism have prevailed; learning has remained "bookish" and academic.

This writer feels that the information in this chapter indicates that: (1) the shortage of qualified elementary and secondary teachers has always existed in Laos. Now that the government has promised education for all children, this shortage becomes even more acute. (2) Up to the present time the subjects taught in the primary and secondary schools provided graduates with no salable skills and little knowledge to cope with the problems of everyday living. (3) Subject matter in all schools appears to be completely devoid of any agricultural training, and yet Laos is predominantly an agricultural country. (4) Teaching methods have inhibited independent thinking and resourcefulness.

The National Teacher Training Center and the Normal Schools have the potential to help change all this. The influence that qualified, personable, free-thinking teachers can exert in the lives of the children of this generation and of generations to come cannot be over-estimated. It seems to this writer that the Royal Government should, therefore, direct its attention to the quality of the teacher training program if the government is to be the true public servant of the people and if it expects its educational program to minister to the needs of the mass population.

CHAPTER VI

ANALYSIS OF THE STUDY AND SUGGESTIONS FOR IMPROVING EDUCATION IN LAOS

The purpose of this chapter is to review and analyze the information presented in Chapters III, IV, and V and to offer suggestions for improving education in Laos. In order to facilitate understanding and to clarify the points this writer wishes to consider and emphasize, the chapter is divided into the following sub-topics:

1. Suggestions for the modification of the present educational policy in Laos.
2. Suggestions for courses of study and methods of teaching agriculture in the rural elementary schools.
3. Suggestions for courses of study in agriculture for prospective rural elementary school teachers at the National Teacher Training Center.
4. Suggestions for training courses in agriculture for in-service rural elementary school teachers.

Suggestions for the Modification of the Present Educational Policy in Laos

As was developed in Chapter V, the Laotian government, in recognition of the urgent need to abolish national illiteracy,

has initiated an all-out educational program promising free and compulsory education for every child between the ages of six and twelve. Because Laos had been a French protectorate for sixty-eight years, French influence prevailed. Upon independence, the Royal Government of Laos quite naturally looked to France and patterned its Ministry of Education along French lines. The obvious consequence of this act has resulted in the creation of an all-powerful and centralized Ministry of Education that dictates educational purposes, policy, and process. The emerging educational system is selective, highly competitive, and geared more to the "elite" and privileged classes of Laotian society than to the rural strata which comprises the vast majority of the population of the nation.

Acknowledging the complexity of the problems facing the Ministry of Education and realizing that the traditional French system of education has brought an appreciable amount of modernization to certain urban centers of the country, this writer feels that the present centralized system stands condemned because it has not ministered to the vast rural population and because it has established educational "examination factories" instead of facilities that produce a free-thinking, independent, resourceful student body. If one of the legitimate aims of education is the development of individual initiative, freedom, and personality based on a sense of social duty and obligation, then the policy of educational centralization in Laos has contributed to stifling the

education process and preventing the adaptation of education to the visible needs of the rural community and of the nation.

Therefore, what is needed in Laos is the creation of a totally new educational spirit which will inspire and nurture a spirit of freedom, experimentation, activity, and adaptability in place of the old spirit of repression, authoritarianism, passivity, and standardization. So long as the system is dominated by a scheme of rigid state examinations, teachers are forced to cover a set syllabus to enable the largest possible number of pupils to pass these examinations. By the same token, what good could result from the introduction of vocational agricultural courses into a system where teachers have little freedom to explore the potentiality of the rural youth and have to follow the present formal system leading to the state examinations?

The state examinations seemingly provide no real motivation for the rural elementary pupils, as was indicated by the findings in Chapter V that the majority of these rural pupils do not continue their education beyond the elementary level. On the contrary, it seems reasonable to assume that these examinations limit both the rural elementary pupil and teacher because they inhibit the student from pursuing his real interests and prevent the teacher from offering instruction that would be profitable to the rural child and community. Therefore, it is the opinion of this writer that these examinations should be greatly modified because the present system tends to be a vicious circle

which can only be reformed by a fundamental and sweeping modification at its heart.

The Ministry of Education must become more flexible and adaptable. Such a recommendation does not imply complete decentralization or the elimination of the central authority because of the great mass of illiteracy. However, the chief problem in Laos is how to combine the necessary centralized authority and the desirable local participation. In Mexico, originally a decentralized state, a solution has been reached which gives greater control to the central authorities without destroying the traditional values of autonomy of the various states. As a result, a successful coordination between federal and provincial systems has produced one of the most unique programs of elementary education for an illiterate peasantry.[1]

At the present time, the provincial government in Laos has only the lengthened shadows of the Ministry of Education to exercise creative or original influence. Building principals and teachers have to obey orders from the Ministry of Education at Vientiane. As a result, the entire country is dependent upon the central authority and since the central authority has tended to represent a "status quo" attitude, this has reduced change and innovation to a minimum, if any.

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[1]Simpson. "Introducing the Mexican Indian to 1932," International Education Review II, (1932), pp. 274-84.

A new policy for Laotian education might well be the modification of the present excessive centralization by a greater coordination of the central authority with the local educational agencies (such as the provincial governments, building principals, and teachers), in the interest of the local communities. Under this new policy, the state would supervise, aid, advise, encourage, and stimulate rather than control local education. This policy of coordination would require that the central government authority should:

(1) exercise leadership and give guidance,

(2) stimulate educational effort at the provincial level,

(3) promote the development of an efficient and articulated system of schools within the provinces and nation,

(4) suggest minimum standards to be obtained,

(5) encourage and promote research and investigation at all levels,

(6) compile and make available accurate information and reports regarding all educational programs,

(7) provide a plan for the free action of communities, groups, school officials, and teachers.

The present educational administrative power in Laos proceeds from the top downwards. The administrative officers on the upper rung, often far removed from the actual life of the rural schools, make the decisions for the country, while the building principals and teachers who are in daily contact with the pupils, are comparatively inarticulate. Under the

new proposed school policy, the Ministry of Education would not merely allow, but would also encourage the local school system, building principals, and classroom teachers to make suggestions in writing concerning any experiment they wished to try in school organization, changes in subject matter, classroom management, and methods of instruction. When the office of the Director General would give permission, then the building principals and the teachers would be allowed to carry out their plans for some months without interference. Then the experiments would be examined by the regional supervisors and written reports sent to the office of the Director General. These reports would enable the office of the Director General to make an evaluation to determine whether a given experiment should be discontinued or allowed to continue. All successful experiments would be published in the monthly educational bulletins and distributed to all of the schools in the country, thus encouraging other teachers to experiment further. In this way, individual teachers or a team of teachers in a given school system would have the opportunity to make their school stand out from the mass by innovations designed to meet individual and community needs. A new policy such as this would result in the gradual change of subject matter to a curriculum that would have true meaning and real value for the students. It would equip them with knowledge and skills to meet and solve the problems of everyday living. It would pave the way for the introduction of vocational agricultural courses as part of the rural elementary school program.

Suggestions for Courses of Study and Methods of Teaching Agriculture in the Rural Elementary Schools

Because Laos is primarily an agricultural country with ninety-three per cent of its population engaged in farming activities, the educational program should not continue to ignore agricultural training. The vast resources of the country, both human and natural, are being wasted through ignorance and poverty. Agricultural knowledge and training could be the key to help change this.

However, this writer wishes to re-emphasize that the following suggested agricultural courses of study can only come alive within the framework of the new educational policy described in the first part of this chapter. Every isolated proposal for innovation or modification of the present formal educational process in the direction of greater flexibility is doomed in advance unless the authorities adopt a totally new educational policy and create an educational spirit for the country of freedom, experimentation, and activity.

As was pointed out in previous chapters, although life in one rural area of Laos is similar in many respects to that in another, differences in socio-economic backgrounds, soil, climate, topography, etc., do exist. Establishing an agricultural program for the elementary schools in Laos, therefore, must be worked out in full recognition of these important factors. To attempt to organize a program for the entire nation solely by means of a central department in the Ministry of Education or the office of the Director General is inadequate.

A. The Program for the Lower Elementary Grades (1 to 4)

Because children in the lower elementary grades are interested in animals, birds, plants, insects, and other natural phenomena, the agricultural program for the first through fourth grades should emphasize nature study. The main objectives of nature study at this level are to arouse the children's curiosity, to teach them to appreciate nature and to observe things carefully, and to encourage them to do with their hands for themselves. Lessons should be practical, dealing with living things with which the children have had experience. Opportunities should be made available for students to observe wildlife out-of-doors in natural surroundings.

Since nature study is closely connected with agriculture, there should be a school farm or garden where children could work on plots of vegetables and flowers. Simple lessons about soil and weather should also be included in the study plan. Simple experiments might be carried out by the teacher to show the effects on plants of lack of light, overcrowding, deep cultivation, etc. As a result of these informal nature study and gardening experiences, children may develop interesting and useful hobbies or receive motivation for their future vocations.

B. The Program for the Upper Elementary Grades (5 and 6)

The informal nature study and gardening projects experienced by the children in the lower grades should prepare them for more specialized and detailed learning in the upper

grades. Certain nation-wide courses could be presented, but of equal importance would be the development of specialized courses of study to train boys for specific farming occupations in the region in which the school is located. At the same time, these courses would not become obstacles in the path of any individual pupils who desire to pursue secondary or higher education.

As the data in Chapter IV has indicated, certain sections within the country engage in specialized agricultural activities. Coffee production is important in the Bolovens Plateau, sub-tropical and temperate zone crops are raised in the Xieng Khuang Plateau area, stock farming is sizeable in the Sedone, Sebanhien, and Sebanfay valleys, the Nam Tha area specializes in citrus culture, etc. To attempt to train young farmers in the fifth and sixth grades in all the many types of agriculture practiced in the country is futile. On the other hand, to limit their training to those elements which are peculiar to their area is equally futile.

Farmers in different parts of the country have developed particular methods of farming in raising special crops or livestock suited to a particular type of soil in a given social-cultural environment. Therefore, the vocational agricultural training offered to the young farmers at the fifth and sixth grade level should be such as will help them succeed under these given conditions.

While there are marked variations in types of farming practiced in Laos, as the findings in Chapter IV have indicated, there are certain large groups of activities

common to all, or nearly all, farms. Soil is the basis of the entire agricultural industry and maintaining soil fertility is a problem everywhere. Poultry, oxen, water buffaloes, and hogs are widely distributed, though the breeds vary. Various field crops are raised in all parts of the country. Relatively few farmers, either peasant villagers or mountain tribesmen, are unconcerned with any one of the groups mentioned above. It would be possible then for the Office of the Director General to frame a nation-wide course of study in vocational agriculture for each school year. With this outline in hand, the details of the courses for a particular school could be worked out by the classroom teacher under the guidance of the local advisory committee. Each teacher would make a study of his community and then formulate the educational program for the pupils of his community on the basis of his study findings. In order to do this, the teacher would be required to assume his duties one month prior to the opening of school. This would enable him to study the needs of the community and to have his plan approved by the Office of the Director General or the regional supervisor before the beginning of school. The teacher could obtain data and information from his own observations, his advisory committee, and from conferences with the more successful farmers of the community.

An outside project study for fifth and sixth graders is strongly recommended because the primary aim of vocational agriculture at this level is to increase the vocational efficiency of the farmers of the future. By means of

productive farm work, the teacher is able to carry the instruction into the agricultural practices of the boy.

In the project study, each student would keep daily notebook records listing first of all the main purpose of the project and then the series of steps which would be encountered in the project. For example, in a sweet potato growing project such a series of steps as the following would arise:

1. Choice of the site and preparation of the land.
2. Selection and treatment of seed for sprouting.
3. Cultural practices.
4. Control of insects and diseases.
5. Harvesting, storage, and marketing.

Each of these steps would subsequently lead to a number of detailed problems. In the selection and treatment of seed for sprouting, the following questions could arise:

1. Where can I select my seed?
2. Who are the most successful sweet potato growers in this community? What varieties did they use?
3. Are the local varieties adapted to my needs or should I try new, improved varieties cultivated in the neighboring nations under similar soil and climate conditions?
4. Is the crop from which I desire to select seed disease-free and true to type?
5. Does the crop give evidence of good quality and good yield?

The teacher's job would be to assist the student with references and information. As the project study got underway, the teacher would help the pupil to analyze problems as they arose. He would visit him regularly at short intervals throughout the project season; examine his daily records, see that the plan was carried out, and offer such suggestions as would be of benefit to the student. In this way, instruction in the classroom would be made to function in agriculture. When a project was completed, records would be studied in school. This analysis would afford guidance not only for the student himself, but also for his classmates and succeeding classes in later projects. Thus the results of farm practices would become material for class study.

As has been illustrated, the methods employed in teaching agriculture at the fifth and sixth grade level of elementary school should be such as would prepare a boy for specific farm duties. To be effective, vocational agriculture at this level should be taught in life situations such as will be confronted in the vocation in the local community.

The program should grow out of a real vocational need because this feeling of need leads to pleasure in the work and satisfaction in achievement. It should be continued through a complete cycle of production--e.g., from selection of rice for seedling to the selection of rice for seedling--, and involve considerable new experience for the student. The aim of the teacher would be to give the boy such a wide representative experience in both knowledge and skill as would fit him for the type of farming which he desires to follow.

Since the chief concern of this fifth and sixth grade vocational agriculture program is with preparing future young farmers for a career in productive farming, the results in the very near future of introducing scientific knowledge and technology will no doubt mean that more food will be produced to feed more people by fewer and fewer farmers. The consequences will be (1) farmers will gradually require higher education to renew skills and to up-date knowledge in order to remain productive, and (2) there will be a tremendous surplus in farm labor which will seek employment elsewhere. Therefore, it is the conviction of this writer to recommend to those who frame the programs of study that it will be necessary to revise the content and direction of the courses as frequently as time and circumstances change.

From the findings of the present situation in Laos in this study to projecting them to the needs in the immediate future of the Laotian rural communities, the nucleus of this study in the next section is to make suggestions of courses of study in agriculture for prospective rural elementary teachers at the NTTC, thus to equip them with technical skill and scientific knowledge which will lead to their success in working with the rural people.

Suggestions for Courses of Study in Agriculture for Prospective Rural Elementary School Teachers at the National Teacher Training Center

In order to determine a curriculum and to make suggestions for courses of study in agriculture appropriate for

the prospective rural teachers at the National Teacher Training Center, the fundamental purpose of the NTTC as stated by the Minister of Education in 1958 has been used as a guideline: ". . . the fundamental goal of the new normal school is to bring to children of the remote villages the knowledge which will enable them to escape from the vicious circle of ignorance, of illness, and of poverty . . . ."[2]

The problem underlying this study is to develop a plan for basic courses in agriculture for prospective rural teachers which will make a direct contribution to farm people by educating them "to escape from the vicious circle of ignorance, of illness, and of poverty . . ." and by showing them how to increase their farm income and improve their standard of living.

Because Laos is predominantly rural, many prospective teachers at the NTTC upon graduation presumably will teach in the rural elementary schools. Preparation in the field of agriculture for these prospective teachers is of great importance for several reasons. First of all, agricultural knowledge and training will enable these teachers to gear education to the lives of the people and to the needs and resources of the community. Second, courses in rural sociology will help them to understand the problems of social life in the rural community. Third, concentrated agricultural courses will increase their teaching efficiency, for

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[2] Ibid.

it is generally assumed that teachers who have had a larger amount of training in subject matters in their fields of specialization are more efficient than those who have had a limited amount of training in their teaching field.[3] Fourth, agricultural knowledge will enable the teachers to help the people increase the productivity of their farms and enrich their lives in other related ways. Fifth, because rural education is a unique and distinct field and because rural children are much closer to nature, training in agriculture and rural sociology will enable teachers to develop a curriculum based upon the environment, experiences, interests, and needs of the rural children. This will blend the school program into the life and work of the community, and only in this way will the rural people gradually come to see the school as an integral part of the community, and themselves as functioning members of it, instead of looking at the school as a central government institution apart from the rural community as it is today.

In short, the development of agricultural programs as part of the total teacher education at the NTTC is in response to the call for socio-economic growth in Laos and to supply the great demand for agriculturalists to match the ninety-three per cent of the total population who engage directly in production farming.

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[3] East Texas State Teachers College Bulletin (State Teachers College, Commerce, Texas, 1942), p. 93.

In their study of total teacher education, Stratemeyer and Lindsey[4] have shown that at Iowa State Teachers College, the component of general education in the total teacher education program is more or less concentrated in the first and second years, while professional and technical education is given in the third and fourth years. In correlating this finding to the teacher training program at the NTTC in Laos, there is much similarity between the two programs in the first two years. However, the NTTC fails to offer alternatives for prospective teachers to receive training in technical fields during the third and fourth years of study, particularly for those preparing to teach in the rural elementary schools. Karls[5] recommended in his study that those who were preparing to teach agriculture in the rural elementary schools should be allowed to major in agriculture. Therefore, from the standpoint of the socio-economic interests of the mass population in Laos, it would definitely be profitable if the prospective rural elementary school teacher at the NTTC would be allowed to major in agriculture during the third and fourth years, and without interrupting the present teacher education program.

The findings in Chapter III (folk-urban continuum), Chapter IV (natural resources, agricultural practices, crop varieties and their distribution, and farm facilities), and

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[4]Stratemeyer and Lindsey, op. cit., p. 33.

[5]Karls, op. cit., p. 76.

Chapter V (educational system, process, and facilities) are used as criteria in formulating courses of study in agriculture for prospective rural teachers at the NTTC.

By understanding the socio-cultural and economic backgrounds of the mass population and their needs, the reasons for attempting to introduce agricultural training programs for prospective rural teachers preparing to work with this mass rural population come to light. By learning about the abundant but unexploited natural resources of the nation, by realizing the types and distribution of crops grown in the country and the misuse of agricultural resources by the mountaineer and the peasant farmer, the desire to disseminate the right kind of information which would help the mountaineers and peasant villagers to realize their potentiality is born.

Chapter V has indicated that terminal education for the vast majority of children in Laos has been in an elementary grade and that most of them return to farming. This calls for practical agricultural courses for the rural elementary schools. This point of view has been confirmed by Nolan[6] and Butler[7] in their analyses of the need for practical agricultural courses to receive the emphasis in the rural elementary school program in the United States when the majority of farmers were not going to school beyond the elementary grades. However, this by no means determines

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[6]Nolan, op. cit., p. 22.

[7]Butler, op. cit., p. 11.

that the proposed courses of study in agriculture for the prospective rural teacher will be fixed permanently. On the contrary, this study takes into full account and understanding that agriculture, the same as any other industry, is dynamic rather than static. Particularly in the present era, society is changing at an accelerated rate. There is little doubt that within this generation, the newly developed Kingdom of Laos (as well as any other nation in Southeast Asia or elsewhere) will increase tremendously the farm output per man hour by the introduction of technology, scientific knowledge, and improved farm practices. In the very near future there will be a steady decline in farm population as people move out of the farm communities to seek employment in the urban areas. With this in mind, the writer realizes that the objectives and content of the agricultural courses proposed for the NTTC should be revised as often as the circumstances and the needs of the people change.

Using the collected data of this study as background and giving consideration to the need for improvement of young farmers in Laos and to the proposed courses of study in agriculture outlined for the rural elementary schools, the following areas of study should be included in the curriculum for the training of prospective rural school teachers at the National Teacher Training Center.

I. Agriculture in Laos

II. Farm Crop Production

III. Vegetable Crops and Home Gardens

IV. Growing Fruit Trees

V. Soils and Soil Fertility

VI. Farm Animals

Contents of Proposed Courses in Agriculture for Pre-Service Training for Prospective Rural Elementary School Teachers at the National Teacher Training Center

I. Agriculture in Laos

A. What is the history of the development of agriculture in Laos?

B. What is the annual value of the farm products produced in the country? --in the neighboring countries?

C. What is the farm population in Laos in comparison with advanced nations? What reasons account for the difference?

D. What industries are dependent upon agriculture and why is agriculture a basic industry?

E. What types of farming are important in different parts of the country? What determines the types of farming?

F. Where are the great agricultural production areas in the country? --grain farming areas? --livestock farming areas?

G. What are the requirements for successful farmers? How does the income from farming compare with the income from other occupations in Laos? --in other advanced nations?

H. What social, educational, and recreational opportunities are available in rural communities?

I. Why is it important to study agriculture? Why is it important to teach agriculture in the rural elementary schools? What benefits are you receiving from the study of agriculture? What benefits will the rural population receive from the study of agriculture from you?

J. What is the role the Department of Agriculture plays in assisting the farmers in Laos today? What is your role in helping the rural folks?

II. Farm Crop Production - rice, maize, tobacco, sweet potato, coffee, etc.

A. Determining the importance of rice, maize, tobacco, sweet potato, coffee, etc.

- What per cent of the farmers in the country grow these crops? What is the quantity and value of these crops annually in the country? What are the principal uses of these crops? What is the average yield per hectare for each of these crops in Laos in comparison to other countries? How can you help the farmers to increase yield per hectare of these crops?

B. Selecting good seed and desirable varieties of rice, maize, tobacco, sweet potato, coffee, etc.

- What are the best varieties of these crops in different parts of the country? Why is it important to grow adapted varieties? What is a hybrid variety? What are the characteristics of good seed? -- good variety? Where can good seed and good varieties be secured?

C. Determining the requirements for rice, maize, tobacco, sweet potato, coffee, etc.

- What soil and climatic conditions are best for each of these crops? What cultural practices are recommended for each of these crops? What fertilizers are best for each of these crops? Is it practical for farmersin Laos to use chemical fertilizers for the farm crops? What other kinds of fertilizers can be used which can be found locally in the farm communities?

D. Identifying and controlling insect pests and diseases of rice, maize, tobacco, sweet potato, coffee, etc.

- What insects attack each of these crops? How may the principal insect pests of each of these farm crops be identified and controlled? What diseases affect each of these crops? How may the principal diseases be recognized and controlled?

E. Harvesting and storing rice, maize, tobacco, sweet potato, coffee, etc.

- What factors determine the time of harvesting for each of these crops? What are the requirements for successful storage of each of these crops? What are the principal insect pests and diseases that attack each of these crops in storage and how may they be controlled?

III. Vegetable Crops and Home Gardens

A. Determining the importance of the home garden

- What are the advantages of having a home garden? What per cent of the homes in the rural area have a home garden? What proportion of the rural family's food supply may be derived from the home garden? What is the importance of the garden crops in providing a balanced diet in the rural communities?

B. Planning the home garden

- Why is a planned home garden superior to one which is not planned? What are the advantages of planning the garden before planting? What factors should be considered in planning the garden? Where should the taller garden crops be planted? Which direction should the rows be arranged? How may a constant supply of vegetables be provided throughout the year?

C. Choosing the kind and varieties of vegetables for a home garden

- What factors should be considered in selecting the crops to be grown? Why is it important to choose a large number and suitable varieties for a home garden? What garden crops are grown most extensively in the rural communities? Where can information on desirable varieties be secured?

D. Securing good seed and good varieties

- What are the characteristics of good seed and good plants of vegetable crops? What are the possibilities of harvesting and saving seed from the home garden?

E. Manuring, plowing, and preparing the vegetable garden

- When should the early varieties of each crop be planted? What are the best methods of planting the seeds?

- What are the best methods of setting the plants? Why do newly-set plants often wilt and die?

- What fertilizers are best for garden crops? What are the best methods of applying fertilizers to garden crops? What are the advantages of using commercial fertilizers? --the disadvantages?

G. Cultivating and caring for the garden

- What happens to the garden soon after planting?

- What is the importance of proper cultivation? What happens if the garden is cultivated when the soil is wet? What are the dangers of deep cultivation? When should cultivation cease?

- What tools are necessary for hand work?

- Under what conditions can irrigation and watering be practiced successfully?

H. Controlling insects and diseases of the garden

- What insects and diseases are most injurious to garden crops? How may the different insect pests and diseases be identified and controlled?

- What equipment is necessary for the control of insects and diseases? What chemicals are used in controlling insects and diseases of garden crops? How does the rotation of garden crops help to control insects and diseases?

I. Selecting, harvesting, and storing vegetable crops

- Why is it important to secure high quality vegetables for home consumption? How does time of harvesting affect the quality? When are garden crops ready for harvesting? What factors should be considered in harvesting the garden crops? Why is it important to use vegetables at the right stage of development?

IV. Growing Fruit Trees

The same principles and content such as that detailed for vegetable crops can be applied to the growing of fruit trees. The major outline for the growing of fruit trees would be something like the following:

A. What kind of fruit trees are most productive in this area?

B. What points should be considered in locating the home orchard?

C. What are the soil requirements for different kinds of fruit trees?

D. What are the best varieties of banana, papaya, mango, citrus, sugar-apple, guava, sapodilla, jack-fruit, tamarind, etc.?

E. Where can good nursery stock be secured for planting?

F. What planting practices are recommended for the different fruit trees?

G. How many trees should the average family plant?

H. How should the young orchard be cultivated?

I. What pruning practices are best?

J. What methods of spraying are used?

V. Soils and Soil Fertility

A. Understanding the processes of soil formation

- What is soil? What is virgin soil? What are the materials from which soil has been formed? How do plants, animals, water, and wind aid in soil formation?

- What types of soil are found in Laos?

B. Identifying a fertile soil

- What is organic matter and how does it affect soil fertility? What are the sources of organic matter? What plant nutrients are found in fertile soil? How does bacteria affect the

fertility of the soil? What is meant by soil acidity and how can this be corrected?

C. Cultivating the soil

- How and when should the soil be cultivated? How does good cultivation improve plant growth? What are the results of cultivating wet soil? Why do cultivated crops deplete the soil more rapidly than grass crops? How does proper cultivation help to control weeds?

D. Supplying plant food in the soil

- What becomes of the plant food in the soil?

- What is crop rotation? How does crop rotation improve the soil?

- What are the different kinds of fertilizers? What is the importance of a green manure crop?

E. Using commercial fertilizers and lime

- What are the plant food materials used in commercial fertilizers? Where are these materials found? How is commercial fertilizer applied?

- What is the value of adding lime to the soil? What crops need lime? Where may ground limestone be secured?

- What is meant by a 4-20-4 fertilizer? What is meant by reinforcing manure with fertilizer? What plant food elements are removed in greatest amounts by crops grown in this area?

- How can a farmer be certain of applying the best fertilizer? What increases in local crop yields may be expected from the use of fertilizer? Is the use of commercial fertilizer practical for Laos at the present time?

F. Saving the soil for the welfare of the communities and the nation

- What is the importance of soil?

- To what extent does soil erosion take place in the nation? What land use practices are mainly responsible for soil erosion and how may this be controlled? How do terraces and contour farming reduce erosion?

- What is the relation of soil conservation to water conservation, forest conservation, and wildlife conservation?

- What is the annual rainfall of the country? What is run-off? How may erosion be prevented from water run-off? How do soil mulch, pasture, and grass conserve soil moisture and reduce soil erosion?

VI. Farm Animals

A. Poultry

- What per cent of the farmers in Laos have chickens? What is the total annual value of poultry production in the country? What is the outlook for the poultry business in the country?

- What is the food value of eggs and poultry meat?

- What are the requirements of a good poultry house? What are the best disinfectants for poultry houses? Why are sun porches often used in raising chickens? What is the value of clean ground in growing healthy chickens?

- What points should be considered in selecting the breed? How should baby chicks be fed? What are some desirable feed mixtures? What antiseptics are best for the drinking water?

- What are the best methods of caring for and using poultry manure?

- What are the common internal parasites of chickens? What are the external symptoms of birds infected with worms? What kinds of worms are most harmful and how may they be controlled? What external parasites are most harmful to chickens and how may they be controlled?

- What are the common diseases of chickens and which diseases cause the greatest loss? What are the symptoms of common diseases and how may these diseases be controlled.

B. Hog production

- What per cent of the farmers in Laos have hogs? For what purpose are they produced? How many kilograms of pork are consumed by the average person in Laos?

- What points are most important in selecting a broad sow? What breeds are raised in the country? What are the advantages in raising purebred hogs? What is a cross-breed hog?
- What is the importance of sanitation? What is the importance of feeding balanced rations? Why should pasture be supplied for hog production? Why is clean, fresh water important?
- What are the common diseases of hogs and how may these diseases be controlled?
- When are hogs ready for the market? What weights of hogs are desired by the market?

C. Water Buffalo and Oxen production

- How important are water buffalo and oxen production in the country? What are the number of water buffalo and oxen in the country? Where are the important water buffalo and oxen producing areas? What are the breeds of meat oxen? What breeds are raised in this country?
- What is meant by dual-purpose cattle?
- How many kilograms of water buffalo and oxen meat are consumed annually by the average person in Laos? What by-products are derived from water buffalo and oxen?
- What points should be considered in selecting a good water buffalo? --a good ox? What feeds are best for feeding oxen for meat?
- What are the common diseases of water buffalo and oxen and how may these diseases be prevented?
- When are oxen ready for the market? Where do farmers sell their oxen and water buffalo?

In addition to the courses described, other topics such as pasture and hay, forestry, farm implements, and the farm home are also of great importance.

Some kind of methods course for teaching agriculture would also be profitable for prospective teachers to enable

them to organize teaching materials creatively and to suggest ways they could provide opportunities that would stimulate their students to think creatively.

Special emphasis should be pointed out here that a course in rural sociology must be offered at the NTTC for prospective teachers preparing to teach in the rural elementary schools. The course in rural sociology would prepare them to deal with the socio-economic characteristics of the rural areas and would familiarize them with the rural philosophy and way of life.

Suggestions for Training Courses in Agriculture for In-Service Rural Elementary School Teachers

Frederick Whitney[8] has pointed out that, "Our public school teachers are like other workers in that they begin the process of development during the period over specifically to preparation, (and) . . . This development must be continuous in order that approximate levels of skill may be maintained while in service."

In advaned nations such as the United States, institutions of higher education exist in almost every corner of the country. The universities, colleges, and departments of education have played important roles in in-service education and staff members of these institutions have served as speakers and consultants in planning in-service training

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[8]Frederick Lamson Whitney, The Growth of Teachers In-Service (The Century Company, New York, 1927), p. 22.

programs and seminars. Since the NTTC is the only existing teacher training institution in Laos, it, therefore, has a very important duty to organize all available provincial agencies and staffs for in-service training programs so that these teachers may keep up-to-date with new educational trends and may show constant growth.

In the past, for many teachers in Laos the normal school teaching certificate (given for either a one-year accelerated training course or a two-year program) represented the end of education rather than the beginning of real intellectual growth. Today it is generally recognized that even a four-year teacher training program beyond sixth grade with an agriculture major in the third and the fourth years is too brief a program to produce the highest level of teaching ability, but rather the preparation to enable a person to begin teaching. The most common method used by teacher training institutions in an attempt to assure professional growth is in-service training. It is also generally recognized that a professional man cannot expect to escape premature professional obsolescence unless he is willing and able to continue his education throughout his lifetime. The development of new knowledge has proceeded at such a rate that neither the individual nor the society in which he works can afford to delay the introduction of that new knowledge for a generation.

This is particularly true in the case of agriculture. The farmer cannot wait when his crops are being chewed up by insects or ravaged by disease; he needs prompt introduction of new knowledge and new techniques to protect his crops, and

this cannot be done save through the continuing education of people in professional practice. From this it seems appropriate that effective in-service teacher education should begin with the real problems existing in the local areas that a group of teachers have to face. Adults learn most effectively when they have specific objectives in mind. Therefore, in-service training for the rural elementary school teachers should deal with specific situations rather than general theories of principles. This in turn will enable the teachers to help people in their respective villages to find solutions to their specific problems.

The data in Chapter III has revealed that the communication system in Laos is underdeveloped, thus travel for a long distance is extremely difficult. In addition, findings in Chapter IV have indicated that Laos has diversified agriculture in different parts of the country. Therefore, the authorities should conduct seminar-type in-service training courses for the local school units at the nearest market town where rural teachers could be gathered easily and return to their jobs within the same day. For example; during the water buffalo and oxen epidemic cycle, a team of veterinarians and technicians should be dispatched to conduct a seminar in-service training program for elementary school teachers in the area where epidemic seems likely to take place. This type of in-service program not only would be convenient and economical for the school teachers, but also would make maximum use of the specialists and technicians.

This is important since there are only a handful of technicians and specialists who are considered qualified in each field in Laos.

Another type of in-service training that would prove very productive would be a workshop type program at the NTTC during the summer session. This type of in-service program could not only offer skills and knowledge to solve specific problems, but its primary aim would be to up-grade teachers in their field, particularly for those who graduated prior to the introduction of the agricultural program as part of the requirement of total rural teacher education. Furthermore, workshops would offer a unique way to make wide use of the consultant services from the Departments of Agriculture, Forestry, etc., available only at the national capital, by utilizing specialists in leadership teams. In addition, workshops would allow school people from different areas to meet and work together, thus affording them opportunities to help one another and to share ideas and experiences for further growth even after returning to their individual schools.

A period of four to six weeks seems appropriate for this type of in-service training. At least two months prior to the summer vacation, the Office of the Director General should notify the school districts throughout the country as to the kinds of programs that will be offered during the summer. The district supervisor or school authority would then inform the classroom teachers. It would be necessary for the Office of the Director General to make it clear to

the teachers who attend the workshops that the government would pay for transportation to and from the NTTC and the full amount of their salary.

Teachers who successfully complete an in-service program should receive an increment in pay and an up-graded certificate. It appears to this writer that these incentives would serve effectively to motivate a substantial up-grading and would encourage the elementary school teachers to grow professionally throughout their careers.

CHAPTER VII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

Purpose of the Study

The purpose of this study is three-fold. First, to gather socio-economic information and to analyze the collected educational data to determine the needs of pre-service and in-service training in agriculture for rural elementary school teachers in order to develop a series of courses of study to equip them with practical skills and theoretical knowledge in the field of agricultural education. Second, to discover and to explain how teacher education in agriculture at the National Teacher Training Center will fit into the total teacher education program and to show how this program could make contributions to the national socio-economic development of Laos. Third, and most important, to suggest a new educational policy, a new teaching procedure, and a new curriculum which will meet the needs of the daily life of the rural folk and thus enable them to improve their standard of living.

Sources of Data for the Study

The primary sources of data for this study included government reports and studies such as "The Annual Statistics

of Laos" and "The Static Report of Education", documents from the archives of the Ministry of Education, unpublished studies and materials filed at the National Teacher Training Center, and personal correspondence.

Secondary sources of data included books and other publications on Laos published by the various foreign missions to Laos such as UNESCO, FAO, ECAFE, USAID, and French authors, and other various articles pertinent to the study.

Summary of Study Findings

The following is a summary of the findings revealed in this study concerning the present social structure, natural resources, agricultural practices, and educational system of Laos.

On the line of folk-urban continuum in Laos, the primitive mountain tribes constitute a small per cent of the population of the country while the peasant villagers make up the vast majority of the population. Market towns serve as links between these rural folk and the urban dwellers of the provincial and national capitals. While the influence of Western civilization has been felt to some extent in the urban centers, there is no sign of drastic change towards urbanization in Laotian society partly because unmechanized agriculture, inefficient methods of food preservation, poor transportation facilities, and few industries limit the amount of surplus food necessary to support an urban population.

There are vast natural resources in this land of extensive agriculture, but most of them have been either misused or undeveloped. Soil fertility is lost because of improper cultivation practices; vast originally forested areas remain unproductive; innumerable rivers and streams offer potential as irrigation facilities and for hydroelectric power.

Rice is the stable farm crop in Laos. Other crops including maize, many varieties of fruits and vegetables, coffee, and tobacco are extensively raised. However, production per unit area of all farm crops is very low in comparison with other Asian countries and the Laotian government spends millions of kips annually importing farm products from neighboring nations.

Considerable fluctuation in crop production from year to year is due to primitive, unscientific farming methods and to natural calamities. A substantial increase in farm production could be accomplished by raising the output yield per unit area by introducing good varieties of seed and plants and the use of fertilizers and insecticides and by improving methods of cultivation and irrigation.

Oxen, water buffalo, poultry, and hog raising are widespread. Assistance is needed to further develop livestock raising in Laos. Fish production needs to be increased because fish supply the main source of protein in the daily diet of the Laotian people.

Despite great diversity, most rural families share certain common concerns. Farm living conditions are far from

satisfactory because of illiteracy, low income, ignorance of basic hygiene and sanitation practices, and lack of communication. Improving existing conditions is a complex problem involving both education and raising the farm income.

Public schools were first established in Laos by the French and are a development of the twentieth century. French influence prevails and the educational organization, divided into primary, secondary, and higher education, and the Ministry of Education follow the traditional French system. The Ministry of Education has become highly centralized.

In recognition of the crucial need to abolish national illiteracy, the Ministry of Education has promised free and compulsory education for all children between the ages of six and twelve. This large a scheme has been very difficult to organize, but since independence in 1954, elementary education has made steady progress in regard to building and pupil increase. The number of new schools has increased on an average of ninety-eight per year. In 1963 alone, 550 new schools were established. The number of elementary pupils has increased on an average of 5,181 each year; in 1963 the increase was 23,152. However, 48.3% of these pupils are in the first grade and 80.3% are in the first three grades. It is evident that the drop-out rate is very high.

The development of secondary education has not kept pace with the elementary school development. Part of the reason is that the Royal Laotian Government has not been able to train Laotian secondary teachers and inspectors, and so

secondary education remains under the control of the French professors. As a consequence, only 3% of the elementary pupils reach secondary school. In the past seven years the number of pupils admitted to secondary school has increased on an average of only eleven per year and up to the present time, less than fifty students graduate annually from the three existing high schools in the entire nation.

Public education has failed to provide adequate vocational and technical training to attract the more able youth of the country, and despite the fact that Laos is predominantly an agricultural nation, there are no vocational agricultural courses offered at either of the two existing technical high schools. This has been due in part to the prevailing French influence which has emphasized academic education. Another contributing factor is that the authorities responsible for making national educational policy have failed to realize the value of establishing vocational agricultural training and have not encouraged the youth of the nation to prepare for this vocation. The development of vocational and technical training programs is the principal educational need of the country today.

Up to the present time, subject matter in the elementary and secondary schools has remained very academic. Textbooks used are those prepared in France for French pupils, thus the education Laotian students receive equips them with little knowledge to cope with problems of everyday living and provides them with no salable skills.

The primary purpose of education in the present system is to prepare students for the rigid state examinations which must be passed for promotion to the next grade or level. Thus teaching methods are rigid and formal and the learning process is one of memorization rather than assimilation of subject matter by observation and reflective thinking.

The National Teacher Training Center near Vientiane and the Normal Schools at Pakse and Luang Prabang are the only teacher training institutions in the country. While these institutions have done a remarkable job in training teachers quantitatively, the shortage of qualified teachers still exists in Laos. Although there are plans for extending the programs of study, the present instruction is formal and academic; prospective teachers are not trained to think freely, critically, and creatively. The National Teacher Training Center and the Normal Schools have the potential to train well-qualified teachers who could effectively minister to the needs of the mass population of Laos.

Conclusions and Recommendations

Using the three-fold purpose of this study as a guide, the conclusions and recommendations are outlined in the following pages.

I. --to determine the needs of pre-service and in-service training in agriculture for rural elementary school teachers in order to develop a series of courses of study to equip them with practical skills and theoretical

knowledge in the field of agricultural education.

The NTTC is the nation's most vital resource in training prospective teachers, many of whom will teach in the rural areas of the country, but today teacher training is limited to a knowledge of the three "R's" and the formal techniques with which to pass this learning on to future pupils. Teachers are trained in traditional practices and values and as a result, traditional practices continue to the present day to be widespread in the public schools.

This writer does not wish to minimize nor underestimate the importance of the three "R's" nor the literacy program that the Royal Government has initiated at the present time; however, this writer believes that the time has come for the Royal Government to give greater attention to developing an agricultural program for teacher education at the NTTC in order to enable prospective rural elementary school teachers to provide systematic agricultural instruction for young farmers who compose the great majority of the Laotian student population.

Since most of the boys in the rural schools drop out of school before they have an opportunity to enroll in high school, there is a definite need for the development of an educational program in agriculture in the elementary schools for these boys. It is likely that the rural elementary school teacher can be an important factor in working with many of these young men and their parents. This phase of guidance constitutes one of the major challenges in the agricultural education in the rural teaching career, and

necessitates that the teachers be freed of the limiting teaching to prepare students for state examinations in order to have time and opportunity to get to know the interests and needs of their students. It means equipping teachers with knowledge and skills which will enable them to show rural students and folk alike ways to cope with the problems of everyday living.

The serious shortage of trained personnel in all of the national departments is exemplified by the fact that there are none of the following specialists in the entire country: agronomist, horticulturist, entomologist, plant breeder, plant physiologist, soil specialist, agricultural engineer, agricultural economist. The entire Department of Agriculture has only three college graduates with agricultural backgrounds that are so generalized that even a modest degree of specialization is unobtainable. These three so-called specialists are assisted by about a dozen agricultural technicians who have the equivalence of three years of training in vocational agriculture at high school level.

Since the majority of the farmers in Laos have not received any assistance nor technical advice in any form from the understaffed Department of Agriculture, it seems reasonable to assume that the rural elementary school teachers could fill in this gap if they had received agricultural training.

Pre-service and in-service rural elementary teachers need agricultural knowledge and skills in order to be

effective instructors who are able to truly aid students today and prepare them for the future.

In light of the foregoing conclusions, this writer submits the following recommendations for pre-service and in-service agricultural training courses of study for rural elementary school teachers:

1. Changes in the curriculum for teacher education at the NTTC should be made in order to insure better understanding of modern methods of instruction and to supply classroom techniques based upon student needs, interests, and experiences.
2. Seminar-type instruction programs for in-service rural elementary teachers should be set up by the Ministry of Education in the market towns to assist teachers with immediate and specific agricultural problems.
3. Programs of study similar to those detailed in Chapter VI should be incorporated in the teacher education program at the NTTC.
    a. The Pre-Service Program for prospective rural elementary teachers.
    b. The In-Service Summer Program for rural elementary teachers.
4. The authorities preparing to execute these programs must be cognizant of the fact that as an industry, agriculture is dynamic rather than

static. Therefore, it is strongly advised that courses of study in agriculture be revised as the time and the needs of the people and the nation change.

II. --to discover and explain how teacher education in agriculture at the National Teacher Training Center will fit into the total teacher education program and to show how this program could make contributions to the national socio-economic development of Laos.

Each year the Royal Laotian Government spends millions of kips importing farm products from neighboring nations. In an agricultural nation with farm crop production as low as that of Laos, there is a great need to improve agricultural techniques in order to increase production efficiency. Since the rural elementary schools are the only existing institutions available in the rural areas, it seems reasonable that they should provide systematic instruction in agriculture to assist farmers to become proficient in farming. This kind of instruction would undoubtedly provide them with knowledge and skills which would help them to solve the problems of every day living and to become healthy, self-sufficient, responsible citizens. Thus the government of Laos must direct its attention to the quality of teachers in the rural areas and train them in agriculture in order that they may effectively meet the challenges of rural teaching.

It is the recommendation of this writer that:

1. Greater emphasis be placed on skilled and professional training in the teacher education

program at the NTTC.

2. Prospective rural elementary teachers be allowed to major in agriculture during their third and fourth years of study.
3. In-service teachers (especially those who graduated before the introduction of agricultural training for rural elementary teachers) be able to attend seminars and specialized training courses during the summer months at the NTTC.

The development of agricultural programs as part of the total teacher education at the NTTC is in direct response to the call for socio-economic growth in the country. These programs would not only strengthen the existing teacher training program, but also would fit into the framework of the national socio-economic development by ultimately raising the standards of living of the rural people and balancing the national deficit incurred from importing farm products.

III. --to suggest a new educational policy, a new teaching procedure, and a new curriculum which will meet the needs of the daily life of the rural folk and thus enable them to improve their standard of living.

Public education in Laos is based on the traditional French system of education and the centralization of the educational policy has been carried to extremes. Educational scholasticism is directed toward mastery of French and the worship of an approved form of conduct by imposing fixed

standards of behavior upon the pupils. The suppression of individuality is the conscious aim and actual result of such an educational policy.

The values of education in Laos today are still thought of in terms of the intrinsic values of European civilization by using textbooks originally written for French students living in France. The use of the French language as the medium of acquiring knowledge has grown to be the key not only to government and commercial administrative positions, but also the symbol of high status.

The curriculum in Laotian schools at all levels is almost entirely academic; and instruction is extremely formal. This tends to fail to produce alert, free-thinking, independent, and resourceful citizens. Teachers are primarily occupied with preparing pupils to pass the state examinations and have little freedom to explore the potentialities and needs of their students.

Since the majority of rural pupils do not continue schooling beyond the elementary level, but return to farming, they need to receive agricultural training in order to become proficient farmers. Agricultural knowledge and skills will enable them to increase their crop production which in turn will improve their standard of living.

The true needs of the rural elementary schools and the rural pupils have been seriously neglected. Because this writer feels that Laos can no longer afford to neglect the rural pupils and schools, and because education must meet

the needs of the rural population, the following recommendations are submitted for revising the educational policy, teaching procedures, and curriculum.

1. Greater freedom of thought and inquiry must be encouraged by reducing the authoritarian characteristics inherent in the educational process at all levels today.
2. A policy of coordination between the central authority and the local educational agencies must be established in which the Ministry of Education would:
   - exercise leadership and give guidance;
   - stimulate educational effort at the provincial level;
   - promote the development of an efficient and articulated system of schools;
   - suggest minimum standards to be obtained;
   - encourage and promote research and investigation at all levels;
   - compile and make available accurate information and reports regarding all educational programs;
   - provide a plan for the free action of communities, groups, school officials, and teachers.
3. The Ministry of Education must encourage classroom teachers and building principals to make suggestions and conduct experiments in school organization, changes in subject matter, classroom

management, and methods of instruction. Successful experiments should be published in the monthly bulletins sent to each school district.

4. A new spirit of education must be created in which rigidity is replaced by flexibility and excessive formality reduced by providing for initiative and freedom.

5. The curriculum in the rural elementary school must be revised to meet the needs of the rural pupils. Suggestions for revision include:

   - Offering informal nature study lessons to pupils in grades one through four. The aims of these lessons should be to arouse curiosity and appreciation of nature; to develop faculties of observation and the ability to work with one's hands.

   - Developing specialized agricultural courses of study for fifth and sixth graders based on the teacher's careful examination of the facts revealed in his study of farm customs, crops, practices, etc. of the local school district. The Ministry of Education could provide a broad plan of general agricultural courses of interest for the entire nation, but the development of specialized courses would be up to the individual teacher. The aim of agricultural programs at this level should be to train young men for specific farming occupations in the region in which the school is located without hampering those students who desire to pursue higher education.

   - De-emphasizing the state examinations.

   - Revising textbooks for Laotian students studying in Laos.

   - Incorporating classroom instruction (i.e., an outside project) whenever possible into the farm practices of the boy.

Based on the analysis and findings of this study, it is the firm conviction of this writer that these recommendations will not only be able to modify the present extreme centralization, authoritarianism, formal, and mechanical type of education to produce a new product more capable of securing the coveted political independence, but also that they will be capable of securing an equally needed freedom in the economic, social, and intellectual aspects of national life as well.

The socio-economic development and progress of humanity in Laos is of vital concern. The mere presence of a population able to read and write, even at advanced levels, is no automatic guarantee that progress will come into being the day after tomorrow. The job of education in Laos is infinitely more complex; it involves political, social, and economic changes of enormous magnitude. Therefore, knowledge, particularly useful knowledge, must be made available to all. Education must be obtained on a widespread basis, not only in the subjects of reading and writing, but also in agriculture and other practical fields as well. The job to be done is so massive. Laos cannot limit herself to the education of a few "elite", hoping that knowledge will in time seep down to the rest of society. Nor can she concentrate on the other extreme, merely educating the mass to read and write with the hope that in a generation this will result in the establishment of a literate society that will progress economically as well. Nor can Laos wait until the advanced

economic development of the country emerges by the discovery of the unexpected oil well or diamond mine.

This writer realizes his limits of time, energy, and ability; however, he is strongly convinced that with the enthusiasm and the full and intensive participation of the nation's young generation, Laos can make a more effective contribution toward the fulfillment of the national desire for rapid socio-economic development and become a self-sufficient country in this competitive world.

APPENDIX I

Population Densities in Laos (1901-61) and in Neighboring Areas

Area	People per Square Mile		Source
LAOS (1901)	4.7		Reinach 1901:92
North	2.9		
South	7.0		
LAOS (1943)	13.1		Pietrantoni 1957:225
North	7.4		
South	17.4		
Central[a]	16.9		
LAOS (1947)	12.8		Based on a population of
LAOS (1957)	15.0		1,169,000. Statistical Yearbook of the United Nations 1957:25 (population given as 1,450,000)
LAOS (1957)	33.0		About Laos (Lao Embassy, Washington, 1957) Population given as 3,000,000.
LAOS (1959)	19.0		Lafront 1959:11
LAOS (1961)	20.0		Fisher 1964:177 (population given as 1,850,000)
Mekong Valley in Laos along Thai border	180		Gaudillot and Condominas 1959:1, 25-6
Vientiane Plain	137	(77)[b]	Area Handbook on Laos (HRAF Subcontrator's Monograph 23, 1955), p. 112
Lamet tribe in Nam Tha Province	6.8		Izikowitz 1951:38

(a) Vientiane, Khammouane, and Savannakhet Provinces
(b) Second figure is without urban Vientiane area

Compiled by Joel M. Halpern
Economy and Society of Laos (Yale University, 1964) Southeast Asia Studies, Monograph Series 5, p. 181.

APPENDIX II

Population estimates by province and the population of the provincial capitals (1959)

Estimated population of the entire Province		Estimated population of the provincial capital	
Luang Prabang	280,000	Luang Prabang	15,000
Vientiane	250,000	Vientiane	64,000
Savannakhet	350,000	Savannakhet	10,000
Khammouane	160,000	Thakhet	7,000
Champassak	220,000	Pakse	10,000
Attopeu	90,000	Attopeu	3,000
Saravane	200,000	Saravane	4,000
Sayaboury	180,000	Sayaboury	3,000
Nam Tha	100,000	Nam Tha	3,000
Xiengkhouang	170,000	Xiengkhouang	4,000
Phongsaly	100,000	Phongsaly	3,000
Samneua	110,000	Samneua	4,000
Totals	2,210,000		130,000

Source: Kingdom of Laos, Ministere de Finances de l'Economie Nationale et du Plan; Bulletin Statistique du Laos.

APPENDIX III

Medical Facilities in Laos by Provinces (1957)

Provinces	No. of Hospitals	No. of Infirmaries	No. of Dispensaries	No. of Districts (Muong or Kong)	No. of Cantons (Tasseug)	No. of Villages (Ban)
Phongsaly	-	1	3	5	31	616
Houa Khong	-	1	5	7	30	599
Luang Prabang	1	1	12	14	68	2,391
Sayaboury	-	1	5	4	29	569
Houa Phane	-	1	8	6	40	873
Xieng Khouang	1	-	6	5	74	1,082
Vientiane	1	-	17	6	74	856
Khammouane	1	-	9	5	57	1,082
Savannakhet	1	-	13	6	103	1,183
Champassak	1	-	9	7	47	597
Saravane	-	1	11	8	61	897
Attopeu	-	1	2	6	34	329
Totals	6	7	100	78	651	11,174

Hospitals are located in provincial capitals.

Infirmaries are located in provincial capitals and big district (Muong).

Source: A. H. Holloway, United States Operation Mission, "Basic Data for Planning a Public Health Program in the Kingdom of Laos (1957); and from Annuaire Statistique du Laos, Vol. IV, 1960.

APPENDIX IV

Only one law on free and compulsory education has been promulgated--Law No. 12, of April 1951, promulgated by Royal Decree No. 112 of 26 April 1951, and amended by Law No. 108 of January 1952. The most important articles of this law are as follows:

Article 1: Elementary primary education in Laos shall be compulsory and free for Laotian children of both sexes from the age of six. It may be provided either in public schools or in properly organized private schools.

Article 2: (New) Now No. 108 of 26 January 1952. Any group of villages in which there are sufficient pupils to justify the establishment of an elementary school, and any tasseng, shall within the limits of the credits available be provided with a public elementary primary school. School attendance shall be compulsory for any village within one kilometer of a public educational establishment.

Article 3: All citizens within a radius of five kilometers shall be liable for the supply of materials and labor for the construction of the school.

Article 4: Any village with an elementary school shall be responsible at its own expense for the upkeep and maintenance of the school, its furniture, and the teacher's lodgings.

Source: UNESCO, World Survey of Education III, Secondary Education (New York, 1961), p. 777.

APPENDIX V

Repartition of the Laotian Population by Group-Age and Sex (1959)

Group-Age	Male %	Female %	Total %
0-4	8.45	8.94	17.39
5-9	6.50	6.95	13.45
10-14	5.30	5.70	11.00
15-19	3.96	4.38	8.34
20-24	2.76	2.62	7.38
25-29	3.51	4.17	7.68
30-34	3.36	2.65	6.01
35-39	3.38	2.93	6.31
40-44	2.48	2.59	5.07
45-49	2.67	1.94	4.61
50-54	1.92	1.92	3.84
55.59	1.82	1.20	3.02
60-64	1.35	1.17	2.52
65.69	1.03	0.81	1.84
70-74	0.49	0.42	0.91
75-	0.19	0.34	0.53

Source: Annuaire Statistique du Laos Quatrieme Volume 1957-60 (Service de la Statistique du Laos, Ministere du Plan Royaume du Laos).

APPENDIX VI

STATUS/ANALYSIS OF ENROLLMENT AND CAPACITY AT THE TEACHER TRAINING INSTITUTIONS IN LAOS (With exception of One-Year Program can expect 2 1/2% drop out each year. Can expect 5% failure in One-Year Program and 10% failure in other Programs on final year exams.)

	9/1963-5/1964 (F.Y.1964)			9/1964-5/1965(F.Y.1965)	
Programs	Planned Enrollmt. (Capacity Production)	Actual Enrollment	Actual Capacity	Planned Enrollmt. (Capacity Production)	Actual Capacity
1 Year	270	210	300	300	348
P.	(95) 100	(67) 70	100	(95) 100	100
L.P.	(95) 100	(67) 70	100	(95) 100	100
V.	(95) 70	(67) 70	100	(95) 100	148
4 Year	1002	977	977	1072	1121
1st yr.	300	281		300	
2nd yr.	275	273		274	
3rd yr.	240	238		266	
4th yr.	(169) 187	(167) 185		(204) 232	
3 Year	75	68	68	95	116
1st yr.	35	30		50	
2nd yr.	20	18		28	
3rd yr.	(18) 20	(18) 20		(16) 17	
5 Yr. Eng.	57	54	54	70	54
1st yr.	20	15		25	
2nd yr.	15	16		14	
3rd yr.	12	12		15	
4th yr.	5	6		11	
5th yr.	(5) 5	(5) 5		(5) 5	
Totals	1404	1390	1399	1537	1639
P.	100	70	100	100	100
L.P.	100	70	100	100	100
V.	1204	1169	1199	1337	1439
#	(477)	(391)		(510)	
##	450	364		460	

P. - Pakse L.P. - Luang Prabang V. - Vientiane

\# Total number graduates anticipated

Total number to teach immediately

APPENDIX VI (continued 2)

STATUS/ANALYSIS OF ENROLLMENT AND CAPACITY AT THE TEACHER TRAINING INSTITUTES IN LAOS

Planned Enrollment and (Capacity Production)						
Programs	F.Y.1966	F.Y.1967	F.Y.1968	F.Y.169	F.Y.1970	F.Y.1971
1 Year	200					
P.						
L.P.	(95)100					
V.	(95)100					
2 Year	150	493	591	591	591	591
P.	150	197	197	197	197	197
1st	100	100	100	100	100	100
2nd	50	(92) 97	(92) 97	(92) 97	(92) 97	(92) 97
L.P.	(45)	148	197	197	197	197
1st		100	100	100	100	100
2nd		(45) 48	(92) 97	(92) 97	(92) 97	(92) 97
V.		148	197	197	197	197
1st		100	100	100	100	100
2nd		(45) 48	(92) 97	(92) 97	(92) 97	(92) 97
4 Year	1120	1138	1183	1206	1229	1252
1st yr.	300	300	325	325	325	325
2nd yr.	293	293	293	316	316	316
3rd yr.	267	286	286	286	309	309
4th yr.	(234) 260	(234) 259	(253) 279	(253) 279	(253) 279	(270) 302
3 Year	133	178	213	252	276	291
1st yr.	60	75	85	100	100	100
2nd yr.	47	58	72	82	97	97
3rd yr.	(23) 26	(40) 45	(51) 56	(63) 70	(71) 79	(84) 94
4 Yr.Eng.	89	101	114	127	132	132
1st yr.	30	30	30	30	30	30
2nd yr.	23	28	29	28	28	28
3rd yr.	13	21	26	27	26	26
4th yr.	13	11	19	25	25	25
5th yr.	(9) 10	(9) 11	(9) 10	(15) 17	(20) 23	(20) 23
2 Yr.Adv.	60		78	108	118	118
1st yr.	30		50	60	60	60
2nd yr.	30		(25) 28	(44) 48	(52) 58	(52) 58
3 Yr.Adv.		58	15	38	65	79
1st yr.		30	15	25	30	30
2nd yr.		(25) 28		13	23	28
3rd yr.					(10) 12	(19) 21
Totals	1722	1968	2194	2322	2411	2463
P.	150	197	197	197	197	197
L.P.	100	148	197	197	197	197
V.	1572	1623	1800	1928	2017	2069
#	(501)	(490)	(614)	(651)	(682)	(721)
##	456	445	534	551	582	600

BIBLIOGRAPHY

Borrowman, Merl L. The Liberal and Technical in Teacher Education. Columbia University, New York, 1956.

Conant, James Bryant. The Education of American Teachers. New York, 1963.

Dewey, John. Experience and Education. The Kappa Delta Phi Lecture Series. The MacMillan Company, New York, 1952.

Furnivall, J. S. Educational Progress in Southeast Asia. Institute of Pacific Relation, New York, 1943.

Garris, E. W. Teaching Vocational Agriculture. McGraw-Hill Book Company, Inc., New York, 1954.

Ginsburg, Norton S. The Pattern of Asia. Prentice Hall, New York, 1961.

Hamlin, Herbert M. Agricultural Education in Community Schools. The Interstate Printers and Publishers, Danville, Illinois, second printing July, 1950.

Hammonds, Carsie. Teaching Agriculture. McGraw-Hill Book Company, Inc., New York, 1950.

LeBar, Frank M. Laos. Hraf Press, New Haven, 1960.

Le Boulanger, Paul. Histoirire du Laos Francais. Librairie Plon, Paris, France, 1931.

Mathieu, A. R. "Chronological Table of the History of Laos," Kingdom of Laos. France-Asia Press, Paris, France, 1959.

Nolan, Aretas W. The Teaching of Agriculture. Houghton-Mifflin Company, Boston, 1918.

Redfield, Robert. The Little Community Peasant Society and Culture. University of Chicago Press, 1961.

Sjoberg, Gideon. The Preindustrial City, Past and Present. University of Texas, 1960.

Somlith, Pathammavong. Compulsory Education in Cambodia, Laos, and Vietnam. UNESCO, New York, 1955.

Stratemeyer, Florence B. and Margaret Lindsey. Working with Student Teachers. Bureau of Publications, Teachers College, Columbia University, New York, 1958.

Tay, Keoluangkot. "Modern Education," Kingdom of Laos. France-Asia Press, Paris, France, 1959.

Tissot, Rene. "Geographical and Human Aspects," Kingdom of Laos. France-Asia Press, Paris, France, 1959.

Vercoutre, Claude. "Present State of Laotian Economy," Kingdom of Laos. France-Asia Press, Paris, France, 1959.

Whitney, Frederick Lamson. The Growth of Teachers In-Service. The Century Company, New York, 1927.

Yves, Henry. Governement General de l'Indochine. Imprimerie de l'Extreme-Orient, Hanoi, Indochine, 1943.

_____. Terres Rouges et Terres Noires Basaltiques d'Indochine. Imprimerie de l'Extreme-Orient, Hanoi, 1939.

ARTICLES, BULLETINS AND PAMPHLETS

East Texas State Teachers College Bulletin. State Teachers College, Commerce, Texas, 1942.

Economic Survey of Asia and the Far East, 1955-62. United Nations Economic Bulletin for Asia and the Far East, Yale University Press, 1963.

Simpson, "Introducing the Mexican Indian to 1932". International Education Review II, 1932.

The Kingdom of Laos, Land of Enchantment in Southeast Asia. revised edition issued by the Royal Embassy of Laos, Washington, D.C., May 1961.

REPORTS

Annuaire Statistique de Laos, Vol. III. Direction de la Statistique, Ministere de l'Economie Nationale Royaume du Laos, Vientiane, Laos, 1954.

Annuaire Statistique du Laos, Vol. IV, 1957-59. Direction de l'Statistique, Ministere de l'Economie Nationale Royaume du Laos, Vientiane, Laos, 1961.

Chen, Cheng-Siang. Taiwan, An Economic and Social Geography, Vol. I, Research Report 96. Fu-Ming Geographical Institute of Economic Development, Taipei, Taiwan, China, 1963.

Dauplay, Paul. Compte Rendu des Travaux. Institut des Rechers Agronomiques et Forestieres, Imprimerie d'Extreme-Orient, Hanoi, 1936.

Halpern, Joel M. Economy and Society of Laos, Monograph Series 5. Southeast Asia Studies, Yale University, 1964.

Historique et Development des Establissements d'Enseignement Secondaire du Royaume du Laos, memio. Ministere de l'Education Nationale, Vientiane, 1962.

Kaufman, Howard K. "Village Life in Vientiane Province," 1956-57 Laos Project Paper 12. Joel M. Halpern (ed.) University of California, Los Angeles, 1961. Mimeo

Khamphao, Phonekeo. Rapport Statistique de l'Enseignement Primaire. Ministere de l'Education, Vientiane, Laos, 1964.

Plan de Development Economique et Social du Laos, Period de 5 ans, du 30 Juin 1959 aul Juiliet 1964. Commissariat au Plan, Royaume du Laos, Vientiane, Laos, 1959.

Rapport Statistique. Direction Generale de l'Education, Annee Scolaire 1962-63. Ministere de l'Education Nationale, Vientiane, Laos.

Rapport Statistique. Direction Generale de l'Education, Annee Scolaire 1963-64. Ministere de l'Education Nationale, Vientiane, Laos.

World Survey of Education, Vol. III, "Secondary Education." UNESCO, New York, 1961.

UNPUBLISHED MATERIALS

Butler, George Sherman. An Analysis of the Agriculture of the Upper Peninsula of Michigan as a Basis for the Seventh and Eighth Grades. M.S. Thesis, 1937. Michigan State University.

Ecole Superieure de Pedagogie. Project d'Organization des Etudes, 1963-64, Memio. Ministere de l'Education Nationale, Vientiane, Laos.

Karls, Glenn Edward. Course of Study in Agriculture for the Elementary and High Schools of Southwest Missouri with Suggestions for Teacher Preparation for These Courses. Ed. D. Thesis, 1946. University of Missouri.

Little, Harry A. Information on Schools of Laos 1963. Mimeo. USAID/Laos, October 1963.

Vercoutre, Claude. L'Economie du Laos. Unpublished mimeo, Vientiane, Laos, 1960.