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ABSTRACT

STUDENT BACKGROUND, UNIVERSITY ADMISSION, AND ACADEMIC ACHIEVEMENT IN THE UNIVERSITIES OF THAILAND

by Richard John Kraft

The purpose of the study was to evaluate the university admissions' procedures of Thailand in the light of the educational goals of the country. The evaluation was concerned with (1) the validity of the Joint Higher Education Entrance Examination and the Maw Saw 5 Examinations, (2) the identification of the areas of greatest difficulty in the sciences and some of the causes, since this was the content area for the study, (3) the influence of socio-economic factors contributing to success or failure in the university, and (4) the influence of the coaching schools and private schools in the admission's process. The background for the study was set with a brief educational history of Thailand, a history of higher education and description of each of the universities, a history and description of the National Education Council, an analysis of the present state of testing in Thailand, and a description of the present admissions' policies and procedures.

The sample consisted of 368 students in the faculties of science at Chulalongkorn, Kasetsart, and Chiangmai Universities, all of whom completed their first year in March, 1968. From the application forms for admittance to the university, biodata was taken for each individual

on the following things: sex, race, age, parent's residence, parent's profession, type of secondary school attended, year of secondary graduation, attendance at a coaching school, and previous attendance at a university. The Maw Saw 5 Examination scores for each student, by subject area, were taken from the records at the Ministry of Education, and the Joint Higher Education Entrance Examination scores were taken from records at the National Education Council. The dependent variables, scores on the first year of work at the university, were taken from student transcripts in the registrar's office at each faculty.

Prior to dealing with the results of the study on each of the sociological and academic variables, an attempt was made to give meaningful background information to aid in the interpretation of the results. This information was taken from studies conducted by historians, anthropologists, sociologists, political scientists and other researchers, who have written about Thailand. Zero-order correlations were run on the computer to test the relationship between the variables, and multiple correlations were used to test the predictive power of the various examination scores when used in combination.

The biodata did not contribute significantly to the prediction of performance on the tests or in the university. The Maw Saw 5 Examination proved to be a better predictor than the Joint Higher Education Entrance Examination, with the English, biology, and mathematics tests providing the

best predictions. Women performed at a higher level on the MS5 Examination and in the university, doing particularly well in subjects involving verbal skills. There are more Chinese students in the universities than their numbers in the general population would seem to warrant, and they generally performed at a higher level than the Thais, this being due to many social, historical and economic factors detailed in the study. The students from the cities and from governmental or business homes have a significantly better chance of getting into the university, and generally perform at a slightly higher level than the rural students. Younger students generally outperformed the older students, while those from public schools did better in all subjects except English, when compared to private school graduates. The coaching schools were found to be a significant educational and economic institution, but the value of their services to the student and to the educational system were found to be lacking. It was found that mathematics was the area giving the students the most difficulty, with the highest levels of achievement in biology. English ability was found to be a crucial factor in university success, with scores on the English tests proving to be the best predictors of success in the science faculties.

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Chapter 1: The Problem

Introduction

Thailand's educational system faces many pressures not unlike those to be found in most nations of the world. These pressures, however, are generally much greater in a developing nation than in the more advanced nations with their highly developed educational systems. The first pressure is the growing need for highly trained manpower for which the universities are primarily responsible. Important advances have been made in recent years in raising the number of qualified teachers, doctors and engineers, but much more needs to be done.

The second pressure is that of the rapid expansion of pre-university education. In 1956, Pratom 7 (grade 7), the last year of the elementary school, had an enrollment of 69,005. By 1964, this had risen to 114,325, with projections calling for 214,000 by 1970 and 572,000 by 1986, the last year for which projections have been made. In Maw Saw 5 (grade 12), the last year of secondary school, the enrollments rose from 10,103 in 1956 to 32,531 in 1964, with projections calling for 51,000 by 1970 and 128,000 by 1986.¹ The third pressure or factor which must be considered is the limited resources of the universities. These limitations include trained faculty and restricted budgets with which to expand facilities.

¹Educational Planning Office, Current and Projected Secondary Education Programs for Thailand (Bangkok: Ministry of Education, 1966), pp. 73-74, 83-84.

A fourth factor to be considered is the growing number of faculties in which students may enroll. It is imperative for a developing nation that the best qualified students in each area are admitted to faculties in which they will succeed and make the greatest contribution to their country. A recent development which is increasing the pressure on the universities is the movement from patronage to educational qualifications as the basis for employment. This has progressed much faster than the development of educational facilities, so that there are far more young people seeking admission to higher educational institutions than can be accommodated.

Need

The success of a student in the university cannot and should not be predicted wholly on the basis of achievement test scores, nor can it be interpreted without taking personal and environmental factors into consideration. For the most part, the Thais have limited their analysis to the examination system and not the broader societal context of the admission's process.

Recent discussions in Thailand have been conducted on the topic of which examination should be used for university admission; the Maw Saw 5 (MS) examination which students must pass to graduate from secondary school, or the Joint Higher Education Entrance Examination (JHEEE), currently used for university admission purposes. In these discussions, however, the possibility of considering other

factors has seldom been raised, and the reliability and validity of these two examinations has not been brought into question. Few studies have been conducted on student achievement in the universities, the use of the MS 5 examination and the JHEEE as predictors of university success, the background of students, and other relevant factors which must be considered in an overall admission's program. The widening gap between the university and the secondary schools has not been sufficiently analyzed, and the possibility of using different admissions' policies at the new regional universities has not been studied seriously.

An important factor which needs to be considered is that admission to higher education is a process, a series of selections over an extended period of time and not a single administrative act. It must be realized that any change in the organization or objectives at the lower educational levels ultimately affects the admission's process at the university level. It is also affected by non-academic forces such as opportunities, aspirations and costs; factors which have not been analyzed in Thailand. Much of the discussion of the process and procedures of university admission has been carried on with no supporting data, and the arguments presented have often been nothing more than personal preferences and prejudices. Decisions have been made on the basis of political expediency rather than scientific knowledge.

Purpose

The general purpose of this study is to analyze the overall admission's policy for the Thai universities in light of their educational goals. Specific purposes are:

1. To analyze the admission's procedures of the National Education Council and the universities.
2. To test the validity of the MS 5 and the JHEEE as predictors of academic success in the universities.
3. To identify the areas of greatest failure in the sciences and some of the causes.
4. To analyze the socio-economic factors in a student's background which contribute to academic success or failure.
5. To analyze the role of the coaching schools in the admission's process.
6. To recommend changes in the current admissions' procedures and policies.

Limitations

This study does not directly reflect all the possible socio-economic and intellectual or academic factors which are involved in a student's admission to and achievement in the universities of Thailand. Only those factors on which information could be found were dealt with, and no attempt was made to deal with personality characteristics, due to the lack of research in this area in Thailand, and the cross-cultural difficulties which a foreign researcher would encounter.

A second limitation is the size and character of the sample used in the statistical part of the study. Only students in their first year at the universities were

used, because of the availability of the socio-economic data on them. The sample is also limited to students in the pure sciences due to the need for comparability, which would be difficult to obtain if disciplinary lines were crossed. It was also chosen because of the need for data on student achievement to be used in the science committee of the University Development Commission. Only three of the institutions of higher learning in Thailand have departments or faculties of science, so it is only those that are used, but the study also includes supporting data from some of the other universities, so the results are more broadly applicable. The statistical study is also limited by the dropping from the sample of those with missing biodata or academic information.

Agreement on what constitutes success is hard to obtain, so there seems to be no better operational index of success in college than the attainment of a degree and its essential prerequisite, satisfactory grades. For these reasons, the definition of success is limited to the student's grades at the university.

The Thai government has indicated its desire to raise the educational level of its people, and to bring changes into the society through the educational system. With the present emphasis on examinations and rote memorization, however, it is not likely that many of the things recommended by this study will bring any real changes or make any significant changes in the status quo.

Overview

In Chapter 2, the pertinent literature is reviewed. Due to the hundreds of studies on academic prediction and student background in the United States, the review of U.S. research will be limited to a few works which summarize the results in the field. In Thailand, research on these topics is quite limited and attempts have been made to find all the relevant studies for review.

In Chapter 3, the stage is set for the study with a brief history of education in Thailand, followed by a history of the universities. Further background information is given on the NEC and the present state of testing in Thailand, along with a detailed description of the present admissions' procedures.

The design of the statistical part of the study is dealt with in Chapter 4, with the instrumentation, and statistical hypotheses setting the stage for the summary and analysis of results in Chapter 5, where the data on socio-economic and intellectual or academic factors are dealt with in detail, using the growing body of sociological and anthropological information on Thailand to provide insights into causes of success and failure.

Recommendations on admission's **theory and practice** make up the bulk of Chapter 6, in addition to sections of future research needs, and the problems of change in the Thai Bureaucracy.

Definition of Terms and Abbreviations

Wat	A temple or religious center to be found in almost every Thai community.
NEC	National Education Council. The governing body of higher education.
JHEEE	Joint Higher Education Entrance Examination. The selection device now used for admission to the university.
MS	Maw Saw. The five years of secondary education. The MS5 refers to the examination which must be passed to graduate from secondary schools.
Pratom	The seven years of elementary education.
MOE	Ministry of Education. The governing body of secondary and adult education. Headed by a cabinet member.
SES	Socio-economic status.
USAID	United States Agency for International Development.
USOM	United States Operations Mission - The USAID group in Thailand.
BSCS	Biological Sciences Curriculum Study.
PSSC	Physical Science Study Committee.

Chapter 2: Review of Literature

United States Research

Due to the large number of studies it would be difficult to review all of the research dealing with the prediction of academic success in the United States, so this review will be limited to those works which summarize the results of individual studies.

Three types of factors have been used in the prediction of academic success: intellective, personality and sociological. Lavin deals with studies in all three areas, but only the intellective and sociological studies will be reviewed, as little has been done in the area of personality factors for the prediction of success in Thailand, and the use of such factors as creativity, motivation and personality in the United States as predictive devices have been relatively unsuccessful.¹ Efforts to use correlations of academic success with interest as shown on the Kuder Preference Record and the Strong Interest Inventory have been found from .11 up to .55 depending on the group studied, but later studies have not fulfilled these early promises.² The four types of studies dealing with academic prediction are outlined below. Global predictors are summarizing variables, while multidimensional predictors make use of several factors.

¹Paul L. Dressel and Associates, Evaluation in Higher Education. Arvo E. Juola. "Selection, Classification and Placement of Students." (Boston: Houghton Mifflin Company, 1961), pp1 305-306.

²Robert M. W. Travers, Educational Measurement (New York: The MacMillan Company, 1955), p. 398.

Chart 2.1

Types of Studies Relating Ability
and Academic Performance³

Predictor	Criterion	
	Global	Multidimensional
Global	Global ability measure used to predict grade-point average	Global ability measure used to predict grades in specific courses
	(A)	(B)
Multidimensional	Several specific ability dimensions used to predict grade-point average	Several specific ability dimensions used to predict grades in specific courses
	(C)	(D)

In a study of the Cell A type, at the graduate level, the Miller Analogies Test was found to correlate .21 with grades by education students. In a multiple correlation of the Cell C type, using the Miller Analogies Test, the undergraduate grade point average, and a mathematical reasoning test, a correlation of .43 with graduate grades was attained. Lavin concludes on the

³David Lavin, The Prediction of Academic Performance (New York: John Wiley and Sons, Inc., 1965), p. 49.

basis of these and other examples that the prediction of performance in graduate school is generally lower than at the undergraduate level due to the more select group and the narrower range of intellectual abilities.⁴

Cronbach's early review of the correlation of college level ability tests with grade point averages finds a correlation of .50 to .55.⁵ More recent research indicates an average correlation of about .50 with a range of .30 to .70. Correlations of the Cell C variety consistently run as high as .60 or .70 with an average of .65.⁶ Of all the factors in a multidimensional study, the high school grade point average or high school rank consistently emerges as the best predictor. This is probably due to the fact that high school grades represent a combination of ability and motivational factors operating in much the same way as they operate in college.⁷ A study by Hoffman found that the best method of predicting a student's college grades was to determine the grades of former students from

⁴Ibid., pp. 50-51.

⁵Lee J. Cronbach, Essentials of Psychological Testing (New York: Harper and Brothers, 1949).

⁶Lavin, op. cit., p. 52

⁷Travers, op. cit., p. 386.

the same high school. This is probably due to motivational factors, study habits and other things which made for academic success, rather than any inherent ability in the school.⁸ More recent studies reviewed by Lavin come to the same conclusion on the use of high school grades as predictors.⁹

Few of the studies have differentiated between males and females, but those that have, generally find a higher correlation for females. The highest correlations in predicting academic success have been obtained at the high school level. Admissions procedures in college tend to eliminate those of lower ability, so that with the narrower ability range, the correlations are generally less.¹⁰

The use of counseling and guidance in the prediction process has been found to be of some value when dealing with homogeneous populations. Travers concludes, however, that on the whole:

There is little evidence that counseling techniques can either upset predictions of academic achievement or provide predictions which are better than those obtainable from measure which have been validated for predicting academic success.¹¹

Measures of ability account for about 35-45% of the variation in academic performance, which is the largest single type of factor, but it still leaves over half

⁸Ibid., p. 387.

⁹Lavin, op.cit., p. 52.

¹⁰Ibid., p. 387.

¹¹Travers., op. cit., p. 390.

unexplained. It is here that nonintellective factors can aid in prediction.

Two types of sociological studies have been conducted. The first deals with the degree of congruence between student and teacher definition of the student's role, followed by an assessment of the association between congruence and level of academic performance. The present study does not look at the effects of specific role relationships, but ~~con~~centrates on the second type of sociological research which deals with the effects of various ecological and demographic characteristics upon academic performance.

Socio-economic status (SES), as measured by occupation, income, residence, and education is the most researched of all ecological and demographic factors. Socio-economic status is a summarizing variable symbolizing a variety of values, attitudes and motivations. Numerous studies have shown a positive relationship between intelligence and SES. When I.Q. is controlled, the relationship between SES and achievement is not totally erased, so SES appears to summarize more than intelligence. The other factors involved are generally called the achievement syndrome, and studies seem to indicate a higher level of motivation in the higher status groups. Several studies, however, have shown that at the upper SES levels, the relationship to academic performance may be inverse.¹²

¹²Lavin, op. cit. pp. 124-126.

Studies on sex differences in academic performance have in most cases shown females to perform at a higher level, and also that there is a higher correlation between intelligence and performance in females than in males. Differences in performance can be understood in terms of a variety of differences in attitudes, behaviors, and values which are a result of differing socializing processes. The fact that females far outnumber males in the teaching profession is thought to have some significance, as is the fact that for males, academic success is an instrumental goal having important implications for a later career, while for females this aspect is less crucial.¹³

Studies of religious background in the United States have found Jewish children more likely to be high achievers, due to a value system orientation which stresses rationality and future time orientation. Religion is an important factor in Thai culture, but religious differences are minimal, due to a preponderance of Buddhists, so that studies on this topic are unlikely to be of any great significance.

Regional and rural-urban studies have been conducted quite extensively and seem to indicate that students from urban settings have a higher academic performance than those from predominantly rural areas, however, this does

¹³Ibid., pp. 129-130.

not hold true for students from cities over 500,000. Regional differences are indicated by higher scores on achievement tests by students from the north. The meaning of these studies is ambiguous, however, due to the level of the schools and differences in socio-economic status.¹⁴

When age is correlated with achievement, the results support the conclusion that the younger students have a higher level of academic performance, since older students are more likely to have had their progress slowed by failure. This seems to be born out in statistics for Thailand, though it is not always true of all developing nations, where students may enter school at a later age. Research on the effect of high school size and academic load on achievement have shown little or no effect of these two factors on school performance.¹⁵

Thai Studies

Educational research is a comparatively recent development in Thailand. Most of what is done in the field is being carried on by research members of the Faculty of Education at Chulalongkorn University and the College of Education at Prasarnmitr. Various sections of the educational bureaucracy have also taken an interest in educational research on a national scale,

¹⁴Ibid., pp. 132.

¹⁵Ibid., p. 133.

so that the future should be much brighter than the past. A major impetus for national educational research at the university level in the future will be the Educational Data Center, recently established to collect data for studies on all aspects of the universities.

In 1967, the National Education Council (NEC) held major discussions on the use of the MS5 (secondary graduation) examination and the Joint Higher Education Entrance Examination (JHEEE). Very little research was available at that time on the validity and reliability of the MS5 examination and the JHEEE, but since then a research project on the validity of them has been started at the Faculty of Education, Chulalongkorn University. The results of these are not yet available. Studies on student background are limited and few have correlated achievement and sociological factors. Research on drop-outs and student attitudes are reviewed because of their relevance to the current study, and the one follow-up study conducted in recent years is also reviewed.

The earliest study on the validity of the JHEEE was completed in 1962, the first year that a joint examination was given. In the study, students' examination scores were correlated with their mid-year grades. The population consisted of a non-randomized sample of 1,059 students at Chulalongkorn University or approximately 28% of all first year university students in Thailand. The researchers

concluded that the correlation coefficients were not statistically satisfactory, and that more research should be done to find better standards for screening students.¹⁶

A study published in 1963 by Pinyo Satorn took 3,325 students at Chulalongkorn University, who were enrolled from 1956-1960. The purpose of his study was to predict success in college work from pre-university scores on Chulalongkorn's entrance examination. His sample was 87% of the total population and was divided into three groups. Group A consisted of those students who graduated without any failures. Group B was made up of those who graduated, but who had failed one or more subjects, and Group C consisted of those who dropped out of the university. The findings were that 29.80% of the students were in Group A, 44.40% in Group B and 25.80% in Group C. A correlation of .384 was found when comparing entrance examination scores and university grades.) Pinyo concludes that the university entrance examination should be one of the factors used to screen students, but that former achievement in high school should not be ignored and that further screening devices need to be found.¹⁷

¹⁶National Council of Education, "The Correlation of the Entrance Examination Scores and the Mid-year Examination Scores: Some Characteristics of the First Year Students of Chulalongkorn University in 1962," The Education Center (November, 1962), p. 9.

¹⁷Pinyo Satorn, "An Investigation of the Success in College," The Thai Journal of Educational Research I (January, 1963), pp. 42-43.

Dr. Pote Sapianchai of the College of Education at Prasarnmitr conducted a study of the entrance examination of that institution for the entering class of 1961. In addition, the study attempted to find out the relationship of age and parent's residence to academic achievement. He found that the overall test score had a low relationship to scholastic achievement, but ~~that~~ a combination of five tests gave a prediction of .53. He also found that when the grade point average of former work was included, a much better prediction could be made. Prediction was better for men, .65, than for women, .44, but no significant difference was found between male and female achievement or between students from Bangkok and other areas of the country. Pote concludes that the entrance examination provided an unsatisfactory level of predictive efficiency for scholastic achievement.¹⁸

A pilot project by Mrs. Prakon Karnasut of Chulalongkorn Faculty of Education served as the impetus for a large scale analysis of the validity of the MS5 examination and the JHEEE. In the study, the records of 134 students in the 1964 entering class in the Faculty of Education, Arts Division, were analyzed in three subjects: Thai, English, and Social Studies. The study did not attempt to consider sex, age or socio-economic differences.

¹⁸Pote Sapianchai, "The Prediction of Academic Success at Prasarnmitr: College of Education," Bangkok, pp. 1-30. (Typewritten.)

A marked relationship was found between high school grades and those earned in the first and second year of university. As predictors, the JHEEE did not differ from the MS5 scores, implying the the latter could be used for entrance to Chulalongkorn University. English was the best predictor of the three subjects, with Thai ranking as the lowest. As is true of most U.S. studies a high correlation between grades in the first and second years at the university was also obtained.¹⁹

The large scale analysis is being conducted by six master's degree candidates under the direction of Mrs. Prakon. The basic procedures are the same as for the pilot project, though the sample is much larger, with the records of several thousand students being analyzed to see the predictive ability of the university entrance examinations. Several problems have confronted the researchers. Valid correlations in some subjects were hard to obtain, due to the lack of correspondence between subjects on the examinations and course work taken in the universities. Some faculties would not allow the researchers to gain access to student scores, while others had already destroyed the records. The lack of any unified grading procedures between the universities or even within the university caused some difficulty in obtaining meaningful correlations.

¹⁹Prakon Karnasut, "Abstract of a Study on the Prediction of University Success," Bangkok, pp.1-30. (Typewritten.)

The members of the team believe that the results of their study will show that the MS5 examination should be used as the basic selection device, with the JHEEE used only for final selection purposes. They see the major failing of both examinations as a lack of objectivity. It is the hope of the study team to publish their results in Thai journals and that they will be used to bring about necessary changes in the present examination system.²⁰

A study of student wastage explored the input and output of Chulalongkorn University to find the causes of the 25.80% drop-out rate. The size of the entering class of 1959 was compared with the graduating class of 1963, and the following statistics were found.

Table 2.2

Student Withdrawal Rate

Faculty	# Input	# Output	% Output
Arts	158	95	60.12
Education	156	80	51.28
Political Science	177	81	45.76
Commerce and Accounting	200	78	39.00
Engineering	308	85	27.50
Architecture	72	7	9.72
Total	1072	419	39.09

The 61% who failed to graduate on time, fell into

²⁰Faculty of Education, Chulalongkorn University, Bangkok, interview with Mrs. Prakon Karnasut and six graduate assistants, February, 1968.

four categories; those who were forced to repeat courses and are still studying in the university; those who were forced to leave after obtaining a three year diploma; those who were forced to leave for failure to meet university requirements, and those who dropped out for their own reasons. It was recommended that other studies be conducted to test the reliability and validity of the entrance examinations, and of the teaching and evaluation in the universities.²¹

A study conducted by the Educational Planning Office dealt with the percentage of students from various types of schools, their background and future plans, and many other statistics on the university entrants from 1962-1966.

The study found that of the students who either failed the JHEEE or elected to stay out for a period of time for other reasons, 50% became part-time students, 5% worked for their parents, 5% worked as laborers, and the rest were unemployed. It also found that for the most part students said that they would return to their home area after finishing university, or would work in any part of the country. This is highly significant for the future development of Thailand. Government service was the goal of 48% of the students with 20% wishing to go into business. Little difference was found between the

²¹Pinyo Satorn, "A Preliminary Study of Wastage in Chulalongkorn University," Paper 10 of the International Conference for the Advancement of Education Research held at the Faculty of Education, Chulalongkorn, December, 1963, pp. 12-13.

two examinations, with student success on both examinations being almost the same.²²

Few follow-up studies have been conducted in Thailand to see what happens to the university graduates. One such study was conducted by the Michigan State University Educational Planning team, and came up with the following statistics. Over 90% of those sampled were working for the government, and after three years, 87.7% were still single. Close to 75% felt that their job was directly related to what they had been trained for in the university. The usual procedure in getting a job was through the civil service, with only 16% gaining a position through the influence of a friend.²³ This last statistic is strong evidence of the growing influence of educational qualifications as the means for obtaining a job, rather than the former widespread use of nepotism and privilege.

Two polls of student opinion have been conducted, one at Thammasat and the other at all four of Bangkok's institutions of higher education. The polls found the students to be nominal Buddhists, with 59% seeing other things in life of much greater importance than religion. Girls tended to take religion more seriously than the boys. Students looked to their friends and teachers in

²²Educational Planning Office, "Report of Research on Student Entrance Examinations, 1962-1966," Bangkok; Ministry of Education, 1967, pp. 1-14. (Mimeographed.)

²³David K. Heenan, "Follow-Up Study of University Graduates," Bangkok, 1965, pp. 1-7. (Typewritten.)

forming opinions about the news, and the radio was the most important news media for most of them. Greater educational facilities, economic reforms, and a rising standard of living were seen as the main problems facing the government, and the students were found to be quite anti-communist in their opinions and attitudes.²⁴

Students in Thailand see the improvement of courses, better facilities, and better relationships between faculties and between universities as the greatest problems facing Thai higher education today. In spite of the forces of modernization, the overwhelming majority of students favored traditional customs over modern ways of doing things.²⁵ The findings of the most comprehensive study of Thai students, Changing Values of Thai College Students by Alan Guskin, will not be reviewed in this chapter, as extensive reference is made to research in Chapter 5.

Summary

Research on the use of intellectual or academic factors shows that the best predictions are obtained from multiple correlations in which a battery of variables are used to predict the overall grade-point average. The best single record to use in the prediction

²⁴USIS, "A Study of University Student Attitudes in (Bangkok) Thailand," Bangkok, 1958, (Mimeographed.)

²⁵Coordination Center for Southeast Asian Studies, "Student Study-Thailand," Bangkok: 1963, pp.1-57. (Mimeographed.)

of university success is the high school record. Socio-economic status (SES) is the most researched of all the ecological and demographic factors. Included in this are such variables as occupation, education, income, attendance at a private or public school, location of residence, and other factors which go to produce an index. Sex, religion, and urbanism are other factors which have proven to be of value in prediction in some U.S. studies. Much recent research in role-relationships and personality factors in prediction have been conducted, but these were not reviewed in the present study.

The history of educational research in Thailand is more recent, and the number and sophistication of the studies is quite limited. A few studies on the validity of the examinations have been conducted and some socio-economic data on university students is available, but much more needs to be done in all these vital areas. The Educational Data Bank, the new Research Division of the NEC, and the many recently trained Thai university professors, in the field of educational research, should all help to fill in the gaps in knowledge which now exist.

Chapter 3: Educational Background

Educational Background

A brief history of education in Thailand is of value in understanding of the present system. Three periods can be noted:

1. The period of traditional education, from 1257-1868.
2. The period of educational expansion from 1868-1931.
3. The present period from 1932 to this day.¹

Traditional education was similar to a medieval guild or monastic order, with education only for the initiate. Students studied with a master and on the completion of their work became his disciple. This master-pupil relationship was always sacred. Even the Lord Buddha considered himself to be primarily a teacher, so the duty of the priests was to teach moral knowledge to all men. Temples were the centers of learning, and the teacher served as the practitioner of astrology, medicine and other magical arts. The teaching method was by reciting crisp aphorisms or metrically phrased statements, which were memorized by the pupil. When the essential texts had been committed to memory, instruction was completed.

The French missionaries, who entered in the late 17th century, brought Western skills and Western education to Thailand. Rama IV laid the foundations for the period of educational expansion with his interest in foreign

¹Educational Planning Office. Current and Projected Secondary Education Programs for Thailand. (Bangkok: Ministry of Education, 1966), p. 1.

languages and close relations with Western countries.²

The greatest individual in Thai educational history is King Chulalongkorn (Rama V), who opened the first secular school in 1871, breaking the monopoly of the priests. New knowledge, outside the priests' control, was added. "Learning continued to mitigate suffering, but the moral rationale was diluted with pragmatic, technical considerations."³ The king made use of the wats, however, for most of his literacy program, thus cutting the expense of building schools and also preserving the old custom of Wat learning.

The Department of Education was founded in 1887 to lay the foundation for educational expansion, and in 1898 the first National Scheme of Education was formulated. The first scheme saw a 3-3-3 plan, which was modified in 1913 to a 3-3-3-2. Higher education began in 1916 with founding of Chulalongkorn University.

The present period dates from the revolution of 1932, with the resultant emphasis on education to meet the social, economic, and political needs of the country. Though there have been several plans since that time, the 1936 scheme of 4-3-3-2 is still in existence today.⁴ The

²Ibid., p. 20.

³L. M. Hanks, Jr., "Indifference to Modern Education in a Thai Farming Community." Reprinted from Human Organization. XVII (#2), p. 10.

⁴Educational Planning Office, op. cit., p. 4.

most recent National Scheme of Education promulgated in 1960 is dealt with elsewhere. By 1935, state education was being pressed into the rural areas, as voting under the new constitution was based on the literacy rate of a province. Truant officers were appointed to enforce compulsory education for all children ages 8-12. Lay teachers were introduced, though many schools were still held in Wats. The curriculum consisted of the 3-R's, morality, history, geography, and scoutcraft. Most of the problems in those early days of modern education are still found today in rural Thailand: large classes, parent's desire to keep children home to work on the farm, cost of uniform, supplies and tuition, lack of transportation, parental dislike of modern subjects, and the feeling by most that education is unnecessary for the farmer.⁵

The modern Thai educational system is deeply indebted to Western influences. Moerman summarizes some of these influences on education in an article on Western influence on the Thai way of life:

The schools, their nationalism, even the nation itself, may be viewed as imports...all children must wear a uniform consisting of Western shorts and shirt for boys, of Western blouse and skirt for girls.... Girls must wear their hair in Western style bangs.... A Western-style salute to a Western style national flag, and perhaps the singing of a national anthem inspired by the West. In class the children learn about Western science....They are taught elements of

⁵Hanks, op. cit., p. 11

Western hygiene....New techniques, new ideas, new values from the West are the core of the curriculum which unites Thailand.⁶

Even with all of the above Western influences, it is difficult to say that Thai education is truly Western. Great ideas are those which can be reinterpreted in another culture and another setting, and this is what Thailand has done. Institutions and ideas from the West are bent to fit into the Thai society and are given a new look by Thai values and outlooks which differ from the West.

Education is of great importance in Thai society today, as one can most easily distinguish the ruling class by its level of education. The ability of the educated elite to dominate is due in part to their superior knowledge in the forms and methods of government and in their monopoly in this knowledge. The Thai educational system, in recent years has become the primary recruiting agency for the elite, an outlet for ambition, and a screening device for candidates for important posts. The fact that a university degree is required for most responsible civil service positions means that the ruling class is characterized by a certain degree of westernization. This is due to the large number of secondary schools formerly run by Europeans, and to the fact that a very high percentage

⁶Michael Moerman, Western Culture and the Thai Way of Life (Berkeley: Center for Southeast Asia Studies, Institute for International Studies. University of California. Reprint #171), p. 46.

of university teachers have been trained in Western countries.

A fact of great importance to Thailand is that, unlike most developing nations, it has no frustrated, unemployed educated class. The educated people have traditionally gone into the civil service and with the great expansion in all areas of a complex, modern government they have been absorbed. The enlargement of the armed forces, police, and educational system has taken a large percentage of the trained manpower, and with their vested interest, the educated class has tended to be conservative rather than radical.⁷

Higher Education in Thailand

With the advent of Western education, the foundations of Thai education were laid. Higher education for many years was closely connected to the various ministries, as many institutions served as pre-service training centers.⁸ The first two institutions of higher education were the Medical School at Siriraj Hospital, founded in 1889, and the Law School of the Ministry of Justice established in 1897. The Royal Pages' School was opened in 1902 to educate and train prospective government servants and

⁷David Wilson, Politics in Thailand (Ithaca, N.Y.: Cornell University Press, 1962), p. 64.

⁸National Education Council, "Brief Information about Universities and the College of Education," Bangkok: 1966, p. 1. (Mimeographed.)

officials. It was reorganized and expanded to be the School of Civil Servants in 1910 during the reign of King Rama VI. The courses for civil servants were as follows: education, medicine, agriculture, jurisprudence, engineering, commerce, foreign relations and public administration. The year 1913 saw the founding of an engineering school at Hor Wang.⁹

By Royal Command, the Civil Service College became Chulalongkorn University in 1916, a memorial to King Chulalongkorn, and the Royal Medical School and the Engineering School were incorporated into the University, so that at the outset the University consisted of four faculties: Arts and Science, Medicine, Engineering, and Political Science.¹⁰ The courses were three years in length and the graduates received diplomas. The years from 1923 to 1934 saw the greatest strides being taken in the field of medicine, due to the support of the Rockefeller Foundation. A six year Bachelor of Medicine degree was added, and the first group of doctors was graduated in 1928.¹¹

Following the Democratic Revolution of 1932, Thammasat University was founded to be the center for advanced studies in the fields of the social sciences. The first faculty

⁹Thailand Official Yearbook, 1964 (Bangkok: Government Printing Office, 1964), p. 482.

¹⁰National Education Council, "Universities in Thailand," Bangkok: p. 1. (Mimeographed.)

¹¹Thailand Official Yearbook, 1964, op. cit., p. 483.

was in Law, which was transferred from Chulalongkorn University, after its having been taken away from the Ministry of Justice that same year. The official name of Thammasat University was the University of Moral and Political Sciences, until 1952. The Chulalongkorn University Act of 1935 gave that institution the right to confer degrees in the fields of medicine, arts, science and engineering.

The Ministry of Public Health took over control of medical education in 1942, the year in which the University of Medical Sciences was founded. The university consisted initially of four faculties: Medicine, Dentistry, Pharmacy and Veterinary Science.¹² The University of Agriculture, Kasetsart University, was founded in 1943, made up of the former College of Agriculture and the School of Forestry, and two new faculties, Co-operative Science and Fisheries. The University of Fine Arts, Silpakorn University, was founded in the same year to "render instruction, to make research on, and to promote the work of art." The university is made up of four faculties: Painting and Sculpture, Architecture, Archaeology, and Decorative Arts.¹³

The revolution of 1958 saw a change in administration in that all the universities were transferred to the Office

¹²Howard Hayden (ed.). Higher Education and Development in Southeast Asia. Vol. III. (Paris: UNESCO, 1967), p.116.

¹³National Education Council, "Universities in Thailand." op. cit., p. 2.

of the Prime Minister, rather than being under the Ministries of Agriculture, Education and Public Health. Each university has become a public body equivalent to a department. The universities today have been made the responsibility of the National Education Council, whose history and organization are dealt with in detail elsewhere in this document.

In the past few years, the efforts in higher education have been directed to developing the provincial universities. The resolution calling for the founding of Chiangmai University was passed in 1960, and the university was officially opened in January of 1965. Initially the university was made up of three faculties: Humanities, Science, and Social Science. The second provincial university at Khon Kaen was started in 1963, with the first class in the 1964-5 academic year consisting of 109 undergraduates.¹⁴ The university contained three faculties in its first year: Agriculture, Engineering and Science and Arts. The last provincial university to come into existence is the University of the South, which had its first entering class in the 1967-1968 school year, but the students met in Bangkok for the first year until the campuses in the cities of the south were finished. The National Institute of Development Administration is a teaching, training, and research insti-

¹⁴ Thailand Official Yearbook; 1964, op. cit., pp. 490-492.

tution, founded in 1966 on the merger of previous programs in public administration, economics, and statistics, with a new program being added in business administration.¹⁵

The College of Education is the one institution of higher education not under the Prime Minister's office, but is controlled instead by the Ministry of Education. It became an institution of higher education in 1964, when the Higher Teacher Training School at Prasarnmit, Bangkok, was given the right to grant Bachelor's, Master's and Doctor's degrees in education.

Chulalongkorn University As stated in the introductory history, Chulalongkorn University was the first university in Thailand, dating back to 1916. The first faculties of Medicine, Political Science, Engineering, and Arts and Science offered only diploma courses of three years. The offering of medical degrees was brought about through the cooperation of the Rockefeller Foundation. A diploma of Education was offered with the founding of the Department of Education in 1930, and for a short time the Law School of the Ministry of Justice became part of the university, before being transferred to Thammasat University. It was not until 1935 that the first degrees were awarded in Medicine, Arts, Science and Engineering, and in that same year the university departments of Architecture and Pharmacy were added to the curriculum. In 1937 the Depart-

¹⁵National Education Council, "Brief Information," op. cit., p. 13.

ment of Veterinary Science was founded and the next two years saw the Departments of Dentistry and Commerce and Accountancy begin their work.¹⁶

In 1957, the Department of Education became the Faculty of Education so as to enable it to cope with its expanding work. The SEATO Graduate School of Engineering was established at the University in 1959, to train students in hydraulic, highway, and structural engineering. In 1968, this school became an independent organization with its own board of trustees and faculty. The Graduate School for the University was founded in 1961, offering Master's degrees in several fields.¹⁷

At the present time the University consists of 9 faculties: Education, Commerce and Accountancy, Political Science, Science, Engineering, Architecture, Arts, Graduate School and the recently added Veterinary Science. It also seems certain now that a Faculty of Economics will be added in 1968, combining the economics faculty members from Political Science and Commerce and Accountancy, which until now had been teaching duplicate courses. All programs in the university offer a four year Bachelor's degree with the exception of the Faculty of Architecture which

¹⁶ Chulalongkorn University, Announcement (Bangkok: Chulalongkorn University, 1965), p. 5.

¹⁷ Ibid., pp. 6-7.

requires five years. Located at the University is a Chemistry Institute which offers a three year diploma course in Practical Chemistry.¹⁸

Chulalongkorn University is located in Bangkok on part of the five hundred acres originally set aside for the location of the campus. The rest of the land is rented out by the university, and along with sizable endowment left by King Chulalongkorn, provides additional funds for buildings and operating expenses.¹⁹ In 1966, Chulalongkorn University had 7,887 students conferring 1,097 Bachelor's degrees in the previous year.

Thammasat University Thammasat University was founded in 1933 as the University of Moral and Political Sciences. It was felt, after the revolution of 1932, that more studies were needed in the social sciences, particularly political science, if the democratic ideology was to permeate the society. Until 1949, the only degree offered was the Bachelor of Law, though later courses were offered leading to Master's and Doctor's degrees in the same field.²⁰ By 1949, the enrollment and number of courses had reached the place where it was felt that separate faculties were needed, so that in that year the university set up faculties of Law, Commerce and Accountancy, Political Science and

¹⁸ National Education Council, "Brief Information." op. cit., pp. 4-6.

¹⁹ National Education Council, "Introduction to Higher Education," Bangkok: p. 3. (Mimeographed.)

²⁰ Ibid., p. 8.

and Economics. Social Administration was added in 1954 as a separate faculty and Liberal Arts in 1962. The Institute of Public Administration, founded in 1955, was dissolved in 1966 to become the basis for the National Institute of Development Administration (NIDA).²¹

Prior to 1962, the university was conceived of as an in-service university, providing an opportunity for any secondary school graduate to pursue higher education in his spare time and to appear for final examinations when he felt ready, a process which often meant that students would attend the university for eight to ten years before receiving a degree. In its total 1962-1963 enrollment of 30,500 there were only 1,000 full-time students. This same ratio applied to faculty as well, so that in the same year there were only 19 full-time instructors as opposed to 352 part-time. In 1962, a selective admissions policy was instituted so that only 1,700 students were admitted, all as full-time students, and this has led to a 1966 enrollment of 13,049 students, and a better faculty ratio of 241 full-time and 289 part-time faculty.²² In 1965 there were 929 graduate students enrolled in the university.²³

²¹The Association of South East Asian Institutions of Higher Learning. Handbook (Bangkok: 1966), p. 168.

²²Hayden, Vol. II. Op. cit., pp. 121-122.

²³National Education Council, "Brief Information." op. cit., p. 6.

As in the other universities, the Bachelor's programs are of four years in length, with Master's and Doctor's degrees being offered in certain selected fields, though almost no Doctorates have been given in the years the University has offered them.²⁴

University of Medical Sciences The University of Medical Sciences traces its history back to the founding of the Medical School at Siriraj Hospital in 1889, which became part of Chulalongkorn University in 1916, upon the founding of that institution. The University was founded in 1942, by incorporating the Department of Pharmacy and Dentistry, and Veterinary Science along with the Faculty of Medicine from Chulalongkorn University to become the new University. Since that time, several new faculties have been added: Dentistry (1943), Pharmacy (1943), Public Health (1948), Faculty of Medicine, Chulalongkorn Hospital (1948), Faculty of Medicine, Chiangmai Hospital (1959), Medical Sciences (1960), Medical Technology (1960), Tropical Medicine (1960), Graduate Studies (1964), Faculty of Medicine, Ramathibodo Hospital (1965).²⁵ Changes which have been made include the 1965 transferring of the Chiangmai Hospital to the new Chiangmai University and the 1968 transfer of the Chulalongkorn Hospital back to Chulalongkorn University.

²⁴Thailand Official Yearbook, 1964. op. cit., p. 487.

²⁵The Association. op. cit., p. 161.

The programs in the university vary in length from a two year nursing diploma, to six years for an M.B. and nine years for an M.D. Other programs include a three year R.N., a four year B.Sc. in nursing, a Ph.D. in Medical Science which is three years research after the B.Sc. and a DDS. in six years of work.²⁶ The University had a total enrollment in 1966-67 of 3,514 students, with 796 full-time teaching staff and 461 part-time. The University, due to the technical nature of its work, has a budget more than twice the size of any other university. In 1968, it will be moving onto a brand new campus, with the most modern possible facilities. The old and the new campuses are both located in Bangkok, and make extensive use of area hospitals, as well as the large number of practicing physicians who make Bangkok their home.

The Faculty of Medicine at the University is the most popular faculty, so it continues to get the best students each year from the Joint Higher Education Entrance Examination. Some of the other Faculties are made up of student's whose first choice was medicine, and who after a year of study in pharmacy or dentistry, will try once again to get into the medical faculty.

Kasetsart University The predecessor of the Faculty of Agriculture was established in 1904 as the School of Silk Culture, under the Ministry of Agriculture. In 1938, this

²⁶Hayden. op. cit., p. 137.

school became the College of Agriculture with a status of a junior college. In 1955, the Faculty of Veterinary Medicine was transferred from the University of Medical Science and the Faculty of Irrigation Engineering from the Royal Irrigation Department, to become the fifth and sixth faculties. The 1966, the Faculty of Irrigation Engineering was reorganized into the Faculty of Engineering and the Faculty of Science and Arts was founded. The year 1967, saw the transfer of the Faculty of Veterinary Medicine to Chulalongkorn University, so that at the present time, Kasetsart University consists of six faculties: Agriculture, Economics and Business Administration, Fisheries, Forestry, Engineering, and Science and Arts. In addition to these faculties a Graduate School has been founded, offering degrees in agriculture, economics, agronomy, and animal science.²⁷

In addition to the main campus, some 14 kilometers north of Bangkok, the university maintains an Engineering campus at Pakkret and three experimental farms, two fishery field stations and three forestry camps for research and student experience purposes.²⁸ Student enrollment in 1966 consisted of 2,726 students including 79 graduate students.

²⁷ Extension Office, Facts and Figures of Kasetsart University (Bangkok: Kasetsart University, 1966), pp. 3-4.

²⁸ National Education Council. "Introduction to Higher Education," op. cit., p. 6.

During its first twenty years, the university granted 2,700 Bachelor's degrees, 3,843 Associate degrees and 10 Master's degrees.²⁹

Plans have been drawn up for a new campus near Nakorn Pathom, but for the present, these plans have been set aside, due to lack of funds and other difficulties. All programs are four years in length, and all students upon completing the third year, automatically receive diplomas. The Master's degree consists of two years study beyond the Bachelor's degree.

The Faculty of Economics and Business Administration was originally the Faculty of Co-operative Science, and it wasn't until 1952 that a degree program was instituted in these fields. The Faculty of Fisheries depended for many years upon technical officials from the Department of Fisheries for instruction, but now has an adequate staff to offer a broader range of fields related to the science of fisheries. The Faculty of Forestry had its inception in the former School of Forestry founded in 1935, under the Royal Forestry Department. It has only been in the past ten years, however, that a significant number of graduates have been turned out with bachelor's degrees in this area. The Faculty of Engineering originated in the Irrigation School of the Royal Irrigation Department, founded in 1937. In 1955, it became part of the university,

²⁹Extension Office, op. cit., p. 5.

and in a 1966 reorganization, it became part of the Faculty of Engineering.³⁰

Silpakorn University Silpakorn University is also known as the University of Fine Arts due to the specialized nature of the curriculum. The University had its foundations in the school of Fine Arts, established by the Ministry of Education in 1934, to train Thai youth in painting and sculpture. The University of Fine Arts was established in 1943 with four faculties: Painting and Sculpture, Thai Architecture, Decorative Art, and Archaeology. The purpose of the university is to promote research and to give instruction in the various fields of art.

The present campus is located in the same compound as the Department of Fine Arts of the Ministry of Education, but in the near future will be moving to a new campus, south of Bangkok. The close relationship with the Ministry of Education is furthered by the fact that the Minister of Education, M.L. Pin Malakul is also rector of the University.

The Faculty of Painting and Sculpture and the Faculty of Thai Architecture offer five year Bachelor's degree courses, while the Faculties of Decorative Art and Archaeology give a four year course. Diplomas in all faculties are automatically awarded upon the completion of the third

³⁰ Ibid., p. 2.

year.³¹

In 1966, Silpakorn University had 518 students and awarded 72 Bachelor's degrees. The faculty consisted of 63 full-time staff members and 69 part-time. The budget of the University is by far the smallest of any of the universities, due to the non-technical nature of the courses offered and the size of the student body.

College of Education Teacher education has a long tradition in Thailand, but it was not until 1954 that an institution on higher education was given the right to grant a Bachelor's degree in education. In ~~that~~ year, the Higher Teacher Training School at Prasarn Mit, Bangkok, became the College of Education, with authorization to grant a diploma in education, and bachelor's, master's and doctor's degrees. A year later, two new branches were added as affiliates: Bangsaen and Patoom Wan. Each branch also offers a four-year degree program, but differs from the main campus, by accepting only M.S. 5 graduates, whereas the main campus at Prasarn Mit accepts students from lower institutions of teacher training.

The College of Education differs from the other universities in that it is under the control of the Ministry of Education rather than the Prime Minister's Office and the National Education Council. The two branch campuses, however, do make use of the Joint Higher Education Entrance

³¹National Education Council, "Brief Information." op. cit., p. 11.

Examination, which is controlled by the NEC. The College received a great deal of aid from Indiana University for the period from 1954-1962, with many professors from the United States being provided, and scholarships to study in the U.S. being awarded to over 100 staff members.³²

In 1955, the College opened its "Twilight School" and summer session for in-service training of teachers. In addition to these programs the campus is often used for institutes, conferences and workshops for professional people. In 1956, the College began giving special training programs to Provincial Education officers and school principals from all over the country at the request of the Ministry of Education.³³ In addition to its training of teachers both pre and in-service, the College of Education also has as its goals the preparation of college teachers and administrators for the teacher training institutions, the provision of consultant services for the educational agencies of Thailand, and the conduct of research on education problems.³⁴

In 1967 there were 4,449 undergraduates and twilight students and 141 graduate students at the main campus. Degrees offered include a Higher Certificate of Education for secondary teachers up to grade 10, a Diploma of Edu-

³² Ibid., p. 14.

³³ The Association, op. cit., p. 154.

³⁴ College of Education, Official Catalog: 1962 (Bangkok: College of Education, 1962), p. 4.

cation for two years work towards the Bachelor of Education degree, and the Bachelor of Education conferred on completion of four years of study after grade 12. Since 1961, the College has been admitting graduate students who work for two years towards a Master's degree.

Chiengmai University The origin of the provincial universities can be found in 1941, as it was in that year that the government decided to establish universities in regional centers. The program was held in abeyance due to the exigencies of the last world war and revived in 1959. On March 29, 1960, the Council of Ministers passed a resolution for the founding of Chiengmai University.³⁵ The university opened in January of 1965, as the first of several planned regional universities. Since 1963, the organization of the university and its development has been under the National Education Council, where it was transferred from the Ministry of Education.

The University was initially made up of four faculties: Humanities, Social Sciences, Science and Agriculture. The Faculty of Medicine at Chiengmai Hospital was transferred from the University of Medical Sciences to give it five faculties. As resources permit, faculties of engineering, architecture, and education will also be added.³⁶ A graduate school is also planned for some future time.

³⁵Thailand Official Yearbook: 1964. op. cit., p. 490.

³⁶Hayden, op. cit., p. 125.

Due to its being a new university, and the need for rapid expansion, the budget has been quite large. The enrollment in 1966-67, its second year of operation, was 1,677 students, with 258 full-time staff members, and 73 part-time. Like the other regional universities at Khon Kaen and Songkla, Chiangmai has its difficulties attracting students and faculty, both of whom much prefer to be in Bangkok. All of the universities courses are four years in length, except the Bachelor of Medicine which is a six year course. It is expected that more and more students will come from nearby provinces and this is proving increasingly true.

The university has attempted to be much more residential in character than is true of the Bangkok universities, so dormitories have been provided for students, and attempts are made to develop a spirit of community with fruitful contacts between students and teachers. Special emphasis is being given to extra-mural work and the conduct of research for the development of technical knowledge and for social benefit.³⁷

Khonkaen University Khonkaen University began with the construction of buildings in 1963, in the Northeastern section of the country. This is the first university in this region of over nine million people, and it is hoped that the agriculturalists and engineers trained at Khonkaen will have enough background to work in the region.

³⁷Ibid., p. 126.

In 1964, the University received its first budget and began operation in June, 1965.³⁸

The university began operation with three faculties: Engineering, Agriculture, and Science and Arts. The Faculty of Science and Arts serves to teach subjects of mathematics, sciences, humanities, and English to engineering and agricultural students. It is tentatively planned that the future faculties to be added will be in Education and Medicine.³⁹

In 1966-1967, the university had 309 students, and plans call for an eventual enrollment of approximately 600 in each faculty. The faculty consists of 69 full-time members and 27 part-time. The area of student and faculty recruitment is most difficult at Khonkaen, due to its remoteness. It is some 440 kilometers from Bangkok, and located in a comparatively small town. The university has had a very difficult time recruiting faculty, and it has only been through help received from the Colombo Plan that the University has been able to staff some of its classrooms. At first, only 10% of the enrollment was from the Northeast but recent figures show that more of the students are now from the area, which is a hopeful sign for the future.

³⁸ National Education Council, "Introduction to Higher Education." op. cit., p. 15.

³⁹ Khonkaen University, Bulletin (Khonkaen: Khonkaen University, 1967), p. 3.

There are Mineral resources and Water-Soil Conservation Centers adjacent to the University Campus, and a Highway Equipment Center, a Meteorological, and an Agricultural Experiment Station.⁴⁰ The university, like the other provincial universities, is residential in nature, so that dormitories for students have been built on the campus, as well as housing for faculty members.

University of the South The University of the South is the newest of Thailand's provincial universities, and is located in three southern cities. It enrolled its first class in 1967 in engineering, but classes were held in Bangkok, until such time as buildings were ready on its own campuses. The major problems faced by this new university are the recruitment of students and faculty, as there are just not enough qualified faculty members to staff the already existing institutions, much less to start a new one, several hundred miles from Bangkok. The buildings of the university are almost ready for occupancy and should be available for use in the 1968-69 school year.

The National Institute of Development Administration (NIDA)

The National Institute of Development Administration is a teaching, training and research institution on the graduate level, founded in 1966, to combine previous programs in public administration, economics, and statistics, and to add new programs in business administration.⁴¹

⁴⁰Ibid., p. 4.

⁴¹National Education Council, "Brief Information." op. cit., p. 13

The campus is located outside Bangkok and offers degrees at the ~~Master's~~ level.

National Education Council The National Education Council traces its history back to 1956, when the government leaders under Prime Minister Pibul and the universities, felt the demand for trained manpower, the need for rapid development of higher education, and the avoidance of unnecessary duplication. As a result of these concerns the University Council was created in the same year with 25 members under the leadership of the Prime Minister.

In 1959, Prime Minister Sarit appointed a Committee for Planning and Improvement of Education under Luang VichitVadakan. The report of that committee led to the founding of the NEC on August 28, 1958, at which time the University Council and office were absorbed into the new agency. As originally set up there were 90 members, a number larger than that of the National Economic Development Board, a point which the Prime Minister emphasized to point up the importance of the NEC in the Development Plans for Thailand. This number was later reduced to the more workable size of fifty in 1965.⁴²

According to the Act of the National Education Council of 2502 (1959), the functions of the NEC are as

⁴²National Education Council, "National Education Council Keeps Growing," Bangkok: 1967. pp. 1-2. (Mimeographed.)

follows:

1. To set up the Educational Scheme and Projects of the nation to suit the conditions of the country to correspond with the economic and administrative programmes of the country.
2. To study various educational problems and suggest possible solutions.
3. To study annual reports and evaluate them.
4. To set up the plan of raising educational funds and advise the Cabinet in order to get such financial means for different levels of education.
5. To study the annual budgets allotted for Universities.
6. To consider the setting up, the transferring and the dissolving of Universities.
7. To consider the setting up, the dissolving and uniting faculties or academic departments in a university.
8. To study and give its approval to the planning of the university curricula.⁴³

The distinguished scientist, Dr. Kamhaeng Balankura, was named the first Secretary-General and Nai Phuchong Bhengsri now serves as his deputy in the rapidly expanding organization.

A new National Scheme of Education was drafted by the National Education Council in 1960, and was put into force in April, 1961. The new scheme discussed the Aims of Education, the Levels of Education, the School System, Compulsory Education and General Policies. The Aims of Thai Education are:

1. The Thai people shall be educated according to their individual capacities, so that they should be moral and cultured citizens, with discipline and responsibility; with good health, mental and physical; and with a democratic outlook. They should be given knowledge and ability to carry out an occupation useful to their country and nation.

⁴³"National Education Council Act 2502" (Bangkok: 2502), p. 2.

2. Boys and girls should receive education in school up to the age of fifteen at least.
3. Boys and girls should strive to gain knowledge and experiences that will serve useful purposes in their lives.
4. Education shall be carried out to serve the needs of the individual as well as those of society, in harmony with the economic and political systems of the country. It shall comprise, inter alia.
 - a. Moral education - that aspect of education which deals with ethics and refinement, more responsibility, and with the spirit of service.
 - b. Physical education - that aspect which deals with the promotion of good health, mental and physical, and a sporting spirit.
 - c. Intellectual education - that aspect which deals with the improvement of thinking, and with the acquisition of knowledge, techniques and principles conducive to a useful and happy life.
 - d. Practical education - that aspect which deals with habits of industry, and perseverance, and with the training in manual skills that are basic to good living and occupation.⁴⁴

Four levels of Education were set. Pre-school was to prepare children for elementary education. Elementary education is to be the level which aims to "promote the development of children towards effective learning and desirable behaviour," and consists of a four year junior school and three year senior school. Secondary education is to explore and promote the interests and aptitudes of boys and girls "in order to prepare them for an occupation or further education," and consists of a lower and upper school, each consisting of not more than three grades or forms. The last level delineated by the Scheme is higher education.

⁴⁴"Announcement: The National Scheme of Education," Published in a special issue of the Government Gazateer, Vol. 77, Part 86. 20th October, B.E. 2503 (1960), p. 1.

Elementary education is considered the right of all children, and secondary education, while not available to all children, must take individual differences into consideration, and be divided into an academic and a vocational stream. Education is recognized as a prime function of the state, and all educational institutions are to be under its supervision. Private education under state regulation is to be encouraged, and adult education is to be advanced.⁴⁵

It is the government's intention to increase the compulsory education level from four grades to seven, but the final accomplishment of this is many years in the future. The NEC drafted the six year plan of Education for 1961-1966 with the Ministry of Education being responsible for 137 projects dealing with the implementation of the National Scheme of Education, and the NEC working on some 45 projects dealing specifically with such aspects of higher education as standards, building construction, research and the establishment of new faculties and institutes.⁴⁶

(On of the major tasks of the NEC in its eight years of existence has been the establishment of four institutions of higher education. The late Field Marshal Sarit

⁴⁵ Ibid., pp. 2-5.

⁴⁶ Kamhaeng Balankura, "The National Education Council of Thailand" (Bangkok: NEC, 1964), p. 4.

Thanarat saw the need for provincial universities and gave NEC the responsibility for their development. His great interest in education is seen in the following quotation:

The progress of the nation depends on the education of its people because education and economic condition should go hand in hand. Provided that the national education is good, the economic condition will be good also. Whenever the national economy is good, the national education will get more financial support. The national education is, therefore, correlated to the national economic condition.⁴⁷

Chiangmai University was opened in 1965, with 291 students, but this enrollment has grown to 2,041 in 1967. In the initial planning stages, the Ministry of Education had charge of the University's development, but the responsibilities were turned over to the NEC in 1964 prior to the opening of the university. The university, while truly a national institution, is serving a greater number of students from the northern provinces each year.

The University of the Northeast was approved in 1965 at the first general meeting of the NEC. From the very beginning, the NEC was charged with the development and organization of the university. The university has been aided by Australia and New Zealand, and Canada which have provided 20 scholarships for graduate degrees to several faculty members each. New Zealand aided in setting up the faculty of agriculture, and Canada, the faculty of engineering.

⁴⁷Ibid., p. 5.

The University of the South was developed by a committee under the chairmanship of the Foreign Minister, Colonel Thanat Khoman, with NEC involvement in reviewing plans and budgets and in faculty procurement.⁴⁸

The National Institute for Development Administration was set up to train graduate students in the fields of Public Administration, Business Administration and Applied Statistics, in addition to its role as an in-service training center for civil service officials. Once again, the role of NEC has been one of reviewing plans and budgets and procuring faculty members.⁴⁹

Another important part of the NEC work has been in the area of manpower and educational development of higher education. In this area, the NEC and Educational Planning Office of the Ministry of Education have been aided by a team of consultants from Michigan State University under the initial leadership of Dr. Raymond Hatch, and more recently under Dr. Archibald Shaw. The major projects have been a Secondary Study completed in 1966 and a Higher Education Staff Analysis completed in 1968. In addition to these two large projects, many short-term consultants have come to aid in the solution of various problems. Two tour groups of Thai university officials and professors have been sent to the United States, and five officers of the

⁴⁸NEC. "NEC Keeps Growing." op. cit., pp. 14-17.

⁴⁹Kamhaeng, op. cit., p. 6.

NEC have received their master's degrees in educational administration, while studying on grants provided by the contract.⁵⁰

A recent addition to the varied program of the NEC is the University Development Commission (UDC) which was established on May 31, 1967. (In 1964, General Netr Khemayadhin toured United States universities at the request of the Rockefeller Foundation, following which Dean Moody Prior of Northwestern University came to Thailand to consult on higher and graduate education. These visits resulted in the formation of standing committee of the NEC to deal with the problems of graduate schools. In 1966, Dean John E. Ivey, Jr., of Michigan State University served as a special consultant on higher education, and noted the great lack of well-qualified instructors. He suggested the establishment of a special body to aid the Thai universities in building their capacity to give Master's and Doctor's degrees, thus cutting down on the great expense and wasted time involved in graduate training overseas.

A Planning Committee (under Prince Wan Waithayakorn, Deputy Prime Minister,) completed the plans for the UDC. The Commission has been set up for ten years, with the

⁵⁰ "The Organization of the Office of the National Education Council." Quarterly Report of the Michigan State Educational Planning Team, pp. 1-9.

major task of producing a sufficient quantity and quality of advanced degrees to meet the developmental needs of the nation. (It is also charged with the responsibility of developing a Ten-Year Development Plan for higher education in Thailand.) The first priority project was a study of the teaching of English as a second-language, which has resulted in establishment of an English Language Center to train graduate students going to the U.S. or England. The second priority project, now underway, is a study of faculties and facilities in the sciences. (Dr. Sippanondha a noted physicist, has been appointed chairman of the Commission and office space has been set aside in the NEC Building.⁵¹

(Another important function of the NEC is the establishment and improvement of facilities and departments. In its eight years of existence, the NEC has approved the establishment of fifteen faculties and eighty-six departments. In addition to the approval of these, it has aided in the planning of the new campuses for Silpakorn University, Nida and Kasetsart University.)

The NEC was given the responsibility for setting up the rules and regulations to govern private universities, and early in 1968 the final draft of a proposed law was completed. Projects now underway include the development of evening classes in the universities, a survey of agri-

⁵¹ NEC. "NEC Keeps Growing." op. cit., pp. 6-8.

cultural education, and a study of nursing education and means to increase the supply of trained nurses.

A continuing function of the NEC is the review of the annual budgets of the universities, which in 1967 amounted to over 400 million baht.) The NEC also serves as the center for the awarding of SEATO scholarships and fellowships, as well as a clearing house for all other international agencies and foreign governments wishing to offer fellowship and aid scholarships to Thai students and professors. (The NEC has increasingly become the Thai spokesman for education internationally, with Dr. Kamhaeng's membership and leadership in such organizations as the World University Service and some of the activities of SEAMES. (The South East Asian Minister of Education Secretariat)⁵²)

Data collection is an important function of the NEC with the leadership of Dr. Thamrong Bhengsri on the newly formed Educational Data Center. Statistics are collected in the Annual University census on budgets, students, faculty, libraries, and many other important pieces of information. The NEC also serves as the Data Collection Center for all offices which have any responsibility for education.

The National Education Council is a growing and changing organization. Early in 1968, an administrative

⁵²Ibid., pp. 12-13.

reorganization was drawn up with the aid of a Michigan State University consultant.

In the Services Division, the University Services Department has responsibility for scholarships, exchange programs and other things to help both students and faculty members. It is also responsible for the administration of Common University Entrance Examination. The department of Conferences and Seminars is headed by a first class officer as are all of the other departments. Its responsibilities include all of the logistics for meetings and conferences in addition to the planning of professional and interdisciplinary conferences for teachers and professors. The reference library and publications of the NEC are under the Information and Library Department. The publications include the monthly bulletin of the Office of the NEC in addition to research findings and technical bulletins which relate to education in Thailand.⁵³

(The responsibilities and goals of the Research Department are well summed up in the bulletin on the New Structure of the NEC:

If the office of the National Education Council is to fulfill its responsibilities to help the development of education in Thailand it needs to bring to its staff persons who are knowledgeable in the area of research. This means persons who understand and can apply research methods and techniques, gather data and interpret same, and can develop educational models. The research phase would not only respond to projects submitted by various

⁵³NEC. "New Organization Structure" (Bangkok: NEC, 1968), pp. 1-6.

schools and agencies associated with education in Thailand, but should initiate studies, make projections, etc., to anticipate new developments.⁵⁴

Within the Operations Division of the NEC an Educational Data Center has been set up in cooperation with the National Statistical Office, the Ministry of Education and the universities. The use of the information stored in the Data-Bank is available for use in reports and in making policy decisions. The University Civil Service Commission has charge of maintaining personnel records on university faculty members and also recommends promotions and the hiring of new staff members.⁵⁵

The University Library and Book Rental Project is in the Special Projects Division and has charge of acquiring books for University libraries with a fund of \$200,000 contributed by the Thai government and USOM. It also is responsible for the book rental program which has been in operation for two years.⁵⁶

The analysis of university budgets, curricula and facilities is one of the functions of the Analysis and Evaluation Department which also must assess the progress of on-going projects and set realistic objectives for future research. The final department is that of Project and Program Development which is made up of three sections:

⁵⁴Ibid., p. 7.

⁵⁵Ibid., pp. 9-10.

⁵⁶Ibid., pp. 13-14.

Elementary, Secondary, and Higher Education. This Department is to advise the committees on Elementary, Secondary and Higher Education, oversee the development of the University of the South, advise in teacher education, and agricultural education, and of greatest importance, to organize a Kingdom-wide educational planning program on all levels and to make recommendations to the Council for projects to ameliorate the education system in Thailand.⁵⁷

Testing in Thailand

Examinations are playing an increasingly more important role in Thailand. As the pressures for admittance to lower and upper secondary schools and the universities increase, examinations will in all likelihood continue to be used as the chief or only selection device. Standardized testing is a comparatively new thing in Thailand, having been instituted approximately ten years ago. Since that time, quite a number of persons have received training in the field of tests and measurement, with several having earned doctorates from the United States. This nucleus, consisting of approximately eighty people, has been the source of much of the agitation in recent years for more valid and reliable examinations of all types and for all ages.

⁵⁷Ibid., pp. 16-17.

The first important admission examination is given by each secondary school for students who have successfully completed grade seven. These examinations are not standardized, being prepared independently by each school. Many who fail to get into one of the better lower secondary schools run by the government enter a private one, if they can afford the tuition. At the end of grade ten, a leaving examination is given. These have been standardized on a provincial basis within the past two years and the Ministry of Education has indicated that they will soon be given on a nationwide basis. Students are then required to pass an entrance examination for grade 11. Formerly this was an examination made up and given by each upper secondary school, but recently it too has been standardized on a province-wide basis and is considered by many to be one of the better prepared examinations. The MS5 examination for secondary graduation and the JHEEE are dealt with in detail in the next section.

The Test Bureau at the College of Education has prepared a test for use at the end of grade ten to select students for normal schools. It has been given nationwide and has been thoroughly analyzed by test experts for reliability and validity. Other tests by the same Test Bureau have been developed for selecting students for the Bachelor's degree program at the College of Education and an objective test for grades three and

four, measuring both aptitude and achievement.⁵⁸

Achievement tests have been prepared for use in the lower elementary grades. These tests were developed by the Department of Elementary and Adult Education, a Department which is now in somewhat of a "lame-duck" position due to the switch in jurisdiction of the elementary schools from the Ministry of Education to the Ministry of the Interior. The Department of Educational Techniques has adopted Thurston's Primary Mental Abilities Test for use in the first seven grades in Thailand, and the Department of Vocational Education, with the aid of the Thai-German Technical Institute has developed various tests of mechanical aptitude.⁵⁹

(A recent development in standardized testing has been the work of several testing experts at the College of Education under Dr. Arthur Hill and Dr. Pote Sapianchai. These men, working under USAID, have been developing tests for use in the selection of students for vocational schools at the end of MS3 (grade 10). Technical and commercial batteries have been constructed with the tests being given in January, 1967. Multiple correlations of .60 and .70 have been obtained, and the test seems to be a valid

⁵⁸ Chaval Paeratakul, interview held in Bangkok, February, 1968.

⁵⁹ Victor Noll, "Draft Proposal for Development of Standardized Achievement Tests and Standardized Mental Ability Tests for Use in the Elementary and Secondary Schools of Thailand," East Lansing, 1966, pp. 13-14.

instrument. The same group has been assigned the responsibility for developing the examinations to select students for the initial common year in the recently opened comprehensive secondary schools, and to classify the students at the end of their first year into the academic, technical and commercial branches of the schools. This second project is just getting underway and may not be completed ~~due~~ to the USOM cancelling of the contract funds.⁶⁰)

In addition to the changes in the MS5 and the JHEEE, an aptitude test for university admissions has recently been constructed. It is in the process of being tested at the present time, but the chances of its being used for university admission in the near future seem quite slim, due to the skepticism of important officials about the examination's validity and reliability.

(A recent change of directors of the Civil Service Examination has brought about significant changes in that important area of testing. Most government employees are required to take a civil service examination to gain government appointment. A majority of the university graduates enter the civil service at the third grade level and vast numbers of secondary graduates and those with some college education enter as fourth class officers in the various government offices. In the past these examinations were almost completely subjective, with questions

⁶⁰ Arthur Hill, interview held in Bangkok, February, 1968.

in general knowledge, cultural subjects, Thai language, English language, civil service law and regulations, practical subjects, and an oral examination. The following are some questions from a representative fourth-class competitive examination.

Questions on the Civil Service Examination

General Knowledge - Part one

1. What is the meaning of the words "civil servant?"
2. What are the classes and positions of civil servants...?
4. What does "culture" mean?....
6. What is a "good citizen?"
8. What are the duties of the Constituent Assembly?...

Thai Language

Write an essay of at least 25 lines on the topic "Life as a woman is difficult, but life as a man is more difficult."

English Language

1. Translation of a simple paragraph into Thai....

Correspondence

1. Write a letter conveying certain specified information.

Handwriting

1. Write 200 words on a subject.

Typing

1. Type a copy of an official letter. 61

Other examinations given by the Civil Service include the Selective Intake Examinations in which a department may test for specific qualifications needed for a job. The

⁶¹William J. Siffin. The Thai Bureaucracy: Institutional Change and Development (Honolulu: East-West Center Press, 1966), pp. 182-183.

third type involves promotion examinations given when a person is ready to move up a class. Not all must take these, as one can be promoted on the basis of seniority, by acquiring a degree abroad, or through social connections.

In most cases the examinations contained little validity except that any candidate who took the time to memorize all the extraneous information would probably fit quite well into the bureaucratic mold. In 1967, Dr. Vilars, a testing expert, was appointed director of the examination and in a very short time has instituted sweeping changes. Realizing the impossibility of any objectivity in grading the former examinations, and realizing their lack of validity, he has instituted an objective examination, using the same titles for sections, but including entirely different subject matter. This was done so as not to antagonize those who oppose the objective testing movement.

The new examination consists of three separate tests. The first is an I.Q. or test of mental abilities, and the second a knowledge of government rules and regulations necessary for civil service. The last section tests for general knowledge and special abilities. The examination is new so it is just now being tested for reliability and validity, but it will hopefully be a much better predictor of government success than the former examination.⁶²

⁶²Dr. Vilars, interview held in Bangkok, February, 1968.

Two reports, published in 1966, pointed out the great need for research on the examination system and the development of new and more valid and reliable instruments. The Secondary Study concluded that the practical effect of:

...the examination system has been to act as a highly restrictive factor impeding further educational attainment by a large number of students.⁶³

It went on to point out the prevailing view among students of education consisting of preparing for and passing examinations. It pointed to the following statistics as an indication of the extent to which the examination system had affected the entire educational system. The data is presented on Chart 3.1.

The Secondary Study went on to recommend the development of a nation-wide, objectively based examination to be used first for an assessment of educational attainment and only secondarily as a selection device. It also recommended the doing away with all entrance examinations in the elementary schools. The last proposal was to encourage students to attend and see the school near their homes by adopting a zoning policy.⁶⁴

The second study was by Dr. Victor Noll. In his proposal for a standardized achievement and aptitude battery, he concluded his discussion of the need for such a program

⁶³Educational Planning Office, op. cit., p. 185.

⁶⁴Ibid., p. 186.

Chart 3.1

Time Wasting in Thailand Schools*

Examination Day (Including review time)	Type of School					
	Central Public Secondary	Local Public Secondary	Central Private	Local Private	Vocational	
	Hrs. Mins.	Hrs. Mins.	Hrs. Mins.	Hrs. Mins.	Hrs. Mins.	
1st term	43 20	56 48	69 --	78 36	26 --	
2nd term	28 48	70 12	73 48	79 12	26 --	
3rd term	81 --	78 --	78 36	96 12	39 --	65

⁶⁵Ibid., p. 139. Quoting Maitri Thoomchal, Thongchai Lavan and Rung Jenjit. Time Wasting in Thailand Schools during the Academic Year, 1963. Bachelor's Thesis, Faculty of Education, Chulalongkorn University, 1964. Publication Number 6, Educational Planning Office, Ministry of Education.

*Time spent in preparing for and taking examinations

with these comments on testing in Thailand:

...while some activity in test development has taken place the work has been sporadic. More important, there is little indication of more having been done than what is preliminary in serious test development.... Correlation and item analysis, attempts to build alternate forms, establish norms or to carry out the other elements of the usual standardization process seem not to have been completed anywhere.⁶⁶

The recent changes in the civil service examination, the new tests being developed by the two bureaus at the College of Education, and the growing numbers of trained experts in the field of testing give hope for the future.

The state of testing in Thailand can be pictured as one of slow, but sure growth and understanding. Those trained in the field and those sympathetic to the objective standardized testing movement see the great need, but do not dare to move too quickly. They want to be sure that when a test is used, it is of proven validity and reliability, so that their critics, and these include many high ranking officials, will not be able to stop their work on the grounds that the "old" way of doing things was better. The future seems bright, however, as some officials who formerly opposed any change are now willing to concede the need for objective tests.

⁶⁶Noll, op. cit., p. 14.

University Admission in Thailand

Admission to higher education is something which begins much earlier than that process which takes place between the close of secondary education and actual enrollment in higher education. In fact, it could be argued that in a developing country such as Thailand, admission to higher education begins at birth, as the chances of a student's receiving a university education are vitally affected by the family into which he is born, the area of the country in which he resides, the racial group to which he belongs, the student's sex, the economic status of the parents, and a great many factors beyond the control of the individual.⁶⁷

Beyond the socio-economic factors, which determine the child's chances for higher education, there are a series of hurdles within the educational system over which a student must pass to become a member of the admission's group. The first of these hurdles has traditionally been an examination by which students pass from Pratom 4, into upper elementary, Pratom 5-7. The statistics for 1964 show the impact that this examination has along with many other sociological factors in limiting further educational opportunity for Thai children. Pratom 4 had an enrollment of 777,400, while Pratom 5 had only 180,422. Pratom 1 had

⁶⁷Most of the information contained in this section has not been put in writing, but was obtained from interviews with over one-hundred knowledgeable university and government officials.

an enrollment for the same year of 1,285,553, showing that by grade 5 only 13% of the original admission's group were still enrolled in the schools. In 1960, the Thai government declared its intention of increasing the level of compulsory education to grade 7, but it will be many years before this is enforceable.

The second hurdle within the educational system comes during the upper elementary period of schooling when the number of students dropped from 180,422 in Pratom 5 to 114,325 at Pratom 7. A formal hurdle must be overcome to enter MS1, the first year of secondary school. Students must pass examinations given by the individual secondary schools, so that only 94,165 actually entered secondary school. By the beginning of secondary school, the admission's group consists of only 7% of the eligible population.

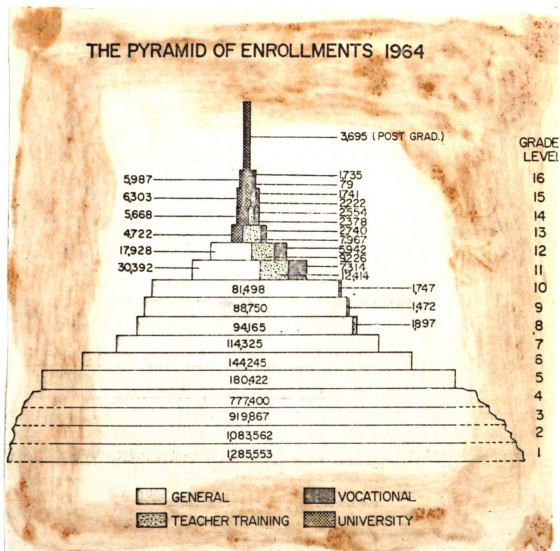
The third hurdle, or actually a pair of hurdles, comes at the end of Maw Saw 3, when students pass both a leaving examination given on a provincewide basis, and an entrance examination to upper secondary school. It is also at this point that students are divided into three groups: general education consisting of arts and sciences, vocational training, and teacher education. Though students who enter teacher training and vocational schools are not eliminated from the university, due to the fact that they can take an equivalency examination for an MS5 certificate, their chances of entering the university are much smaller. The university admissions group is essentially limited,

therefore, to those in the arts and sciences, who total 30,392 in MS4 and only 17,928 in MS5. It is thus evident that only a little more than 1% of the original admission's group is still enrolled in the last year of secondary school.

Thai students must still face two more hurdles before being admitted to the university. Approximately 70% pass the first hurdle, the MS5 examination, reducing the admissions group to around 13,000. Of this number only about 5000 each year are able to pass the Joint Higher Education Entrance Examination, the final step in university admission. Less than 3/100 of 1% enter universities in Thailand, thus making it one of the more select populations in higher education around the world. (The pyramid on the following page vividly portrays the enrollment at the various levels.

It is abundantly evident from the preceding discussion that most of the population has been eliminated long before reaching the point of the final decision on admittance to the university. The question can be legitimately raised: How are they eliminated? In other countries, three factors are often considered in the selection process. Students are selected for further education by examinations, orientation and the various limitations on opportunity. In Thailand, the selection throughout the system is thought to be solely based on the use of external examinations, which are supposed to be a fair and objective selective

Chart 3.2





device. A counseling and guidance system has been proposed for use in the new comprehensive schools, but at the present time, student orientation is almost non-existent as a selection device in Thailand. The third selection device is the limitation of opportunity, by such factors as lack of schools in the rural areas, the costs of education, both overt and hidden, and the lack of motivation or drive to continue one's education. (These are dealt with in greater detail in the discussion in Chapter V dealing with residence, sex, race, religion and other factors which serve as the underlying causes for eventual admission or rejection to the universities.)

University admission prior to 1962, was a matter left strictly up to each academic institution. Procedures varied, but in most cases, a student was required to be a graduate of a secondary school or have equivalent education, pass an entrance examination given by the university to which he was applying, and in some cases to pass an interview.) This procedure worked, as long as the number of candidates was limited to 2000 or 3000 a year. With the rapid expansion of secondary education there were soon far more candidates than there were positions available in the universities. This rapid expansion is seen in these figures for Maw Saw 5, the final year of secondary school. Approximately one-fourth of these students were in vocational schools and in most cases not eligible for university

entrance, and another third fail to pass the MS5 examination, but this still leaves around 18,000 candidates applying for 8000 places in the universities.

Table 3.3
Enrollment Trends

Year		Maw Saw 5	Total MS 1-5
1956		10,103	155,373
1958		18,729	233,870
1960		25,131	294,055
1962		29,143	327,542
1964		32,531	348,931
1966	estimated	36,000	391,000
1968	projection	40,000	477,000
1970		51,000	591,000
1975		72,000	758,000
1980		93,000	1,001,000
1986		128,000	1,397,000 ⁶⁹

Prior to 1962, most candidates could be admitted to one of the institutions, and those who failed to pass the entrance examinations of the faculties of their choice were admitted to Thammasat University which had an open-door policy until that time. The first joint examination was conducted in 1961, by the National Education Council, for the University of Medical Sciences and Kasetsart University. In 1962, 10,000 candidates were eligible for university admission. Nine thousand applied to Chulalongkorn University, 9000 to Thammasat University and 7000 to the University of Medical Sciences and Kasetsart University. This meant that there were several thousand candidates who took all three entrance examinations. Seven hundred candi-

⁶⁹Ibid., pp. 74 and 84.

dates were admitted to all three universities and thereby causing 1400 vacancies in other institutions. This set off a chain reaction, with each faculty having to announce for candidates next in merit to present themselves. It sometimes took a week to fill a faculty with students, with the result that some faculties were two months late in starting the 1961 school year.

It was therefore decided to have the National Education Council coordinate a joint entrance examination for all the universities for the 1962 school year. This it has been doing except for 1964, when Chulalongkorn demanded the right to give its own examination following the death of Prime Minister Sarit, who had originally instituted a joint examination. The chaos, however, which resulted in that year caused the universities to return to the joint examination, which is still in existence today.⁷⁰

From the original four universities involved in the joint examination, the number has grown to twelve, including the following institutions:

- Kasetsart University
- Khonkaen University
- Chulalongkorn University
- Chiangmai University
- Thammasat University
- University of Medical Sciences
- Silpakorn University
- Southern University
- Thonburi Technical Institute
- College of Education
- College of Telecommunication
- National Institute of Development Administration

⁷⁰Kamhaeng Balankura, interview in Bangkok, January, 1968.

The merits of the joint examination have been listed by the N.E.C. as follows:

1. It provides a solution to the problem of resulting vacancies.
2. On the whole, candidates could eventually choose the fields closest to their requirements, being allowed as many as six choices in order of preference at the various institutes. Admission of candidates is considered on the basis of both the examination results and the needs of the individual candidates in order of merit.
3. It saves not only funds, but time and energy on the part of the students, the parents and the examination committee. The students do not have to waste time and money taking three to four entrance examinations at various institutes which would involve more or less the same subjects or topics.
4. Joint entrance examinations such as this would help scatter the better students in the various institutes of higher learning.
5. It enables the collection of accurate statistics which would be of value in the improvement and organization of higher education.⁷¹

The questions for the examination are prepared by a committee of six members. These individuals are professors at the various participating institutions, and are chosen for their competence in a particular field. Each submits a list of questions, the best of which are then chosen for use on the examination. At first, most of the questions were of the essay type, but due to the vast number of candidates, pressures from testing experts, and the desire to cover a broader segment of a field, more of the questions are now of the short answer variety. Seventeen patterns

⁷¹Thailand Official Yearbook: 1964, op. cit., p. 495.

of examinations were given in 1967, but the number has been cut back in 1968 to eight. Fields tested in 1967 included Social Science, English, Thai, Mathematics, (Elem.), General Science, Biology, Mathematics, Chemistry, Physics, Drawing, French, German and special subjects. Each faculty has the right to designate which examinations the candidate must sit for, and this may total anywhere from three to five.

Students fill out application forms prepared by the National Education Council. A fee of B10 (50¢) is charged for each examination taken, the students taking an average of seven examinations, as most choose several faculties requiring different tests. A student makes six choices of faculties. This number was chosen, according to the Secretary-General of the NEC, because it was found that students seldom desired to enter more than six faculties, and many never even showed up if appointed to their sixth choice. It has been found, however, that some good students who picked six very difficult faculties to enter, failed to make it into any of them and thus poorer students were admitted to other faculties. For this reason, a computer may be used so that students may choose up to twenty faculties.

The examination is given in the middle of April each year, approximately one month after the Maw Saw 5, secondary graduation examination. In the intervening month a large percentage of the students attend coaching schools dis-

cussed in detail in Chapter V.) Results of the MS5 examination are generally not known, so most MS5 students finishing that year, plus a large number who failed in previous years sit to take the Joint Higher Education Entrance Examination. In addition to these two groups there are a large number of equivalency students and vocational and teacher education graduates who take the examination.⁷² In 1967, the totals were as shown on the chart on the following page. An analysis of the results of the examination is given in Chapter V.

The examination is given in Bangkok and Chiangmai with students having to go to one of these two locations to take it. University professors and 3rd grade civil servants are used as proctors for the examination, and once the examinations have been graded, approximately one hundred students from the University of Medical Sciences process the scores and assign students to the appropriate faculties. This large use of university students has sometimes compromised the secrecy of examination scores, so that in 1967 an estimated 1000 students knew the results of the examination prior to their publication.

The examinations are graded in approximately two weeks, by the end of April. Those making up a particular question are responsible for its grading, meaning that some are responsible for 10,000 essays. Often the person responsible

⁷²Prasit Tulyathorn, interview in Bangkok, March, 1968.

Table 3.4

Number and Percentage of Successful Candidates on the JHEEE by Type of MS5 School⁷³

Type of MS5 School	No. of Candidates	No. of Successful Candidates	Percent Successful
Bangkok-Thonburi	12,789	5,251	41.05%
Public	5,188	2,931	56.47%
Private	7,601	2,320	30.52%
Outside Bangkok	4,562	1,586	34.76%
Equivalency*	2,597	970	37.35%
Vocational	2,839	313	11.02%
Teacher Training	1,066	83	7.70%
Abroad**	33	22	66.66%
Others	21	6	28.50%
Total	23,907	8,231	34.42%

⁷³ Office of the NEC, Report: The Joint Higher Education Entrance Examination: Academic Year 1967-1968 (Bangkok: NEC, 1967), p. 1.

*Students who may have taken training other than Maw Saw, Vocational or teacher education, or those that took the examination in August

**Students educated in other countries

for grading a particular question will assign it to junior members of his department. Seldom, if ever, is a question read by more than one person. The members of the examining and grading committees are paid for their work on the examination.

Once the students have been assigned to a faculty on the basis of their scores and their choices, many faculties require an interview, which almost all students pass. Students in medical science must take an aptitude test for further placement as must students in some other faculties.⁷⁴ Students who fail the examination may retake it as many times as they wish, though the chances of getting in are slimmer each year.

The university entrance examination is passed on the basis of one's total score on all examinations taken, rather than by individual fields. Thus, many students were admitted to a science faculty on the basis of an extremely high English score, even though their science scores were quite low. This problem is further analyzed in Chapters V and VI.

The Joint Higher Education Entrance Examination has been the subject of much discussion in the past two years at all levels of government. In July, 1966, the First Seminar on Higher Education met, and a discussion was held on the improvement of the entrance examination and the providing of better devices to measure achievement. Three

⁷⁴Kamchorn Manunpichu, interview in Bangkok, January, 1968.

criteria for a good candidate for the university were laid down: thorough knowledge, intelligence, and adaptability. Three methods of selection were set forth: (1) In the November prior to the students taking the MS5 examination, an aptitude test to measure intelligence should be given as the basis for university admission. (2) The results of the MS5 examination in March should be accepted as the principle for measuring student achievement. (3) The students should have a high aptitude test score, have knowledge in needed subjects as measured by achievement tests, and pass an interview before being admitted to the university. The committee adopted the third method giving the following reasons: The National Education Council is a good/clearing house, and the MS5 examination is a test of student memory, so another examination needs to be given. The Aptitude Test will take at least ten years to develop, and another examination is needed, anyway, to take care of those students who failed in previous years or attended programs other than that leading to the MS5 examination. The result of the committee's deliberations were passed on to the NEC and a new committee was appointed to further study and improve the method of university selection.

The first meeting of 1967 of the NEC held on January 26, was spent in a discussion of the Joint Higher Education Entrance Examination. The Council decided to once again use a joint examination rather than each university giving

its own. In November, 1967, the Executive Committee of the NEC and the special investigation committee recommended to the full council that they should approve the MS5 examination results as the final method for student entrance to the universities. It was felt that if the MS5 examinations were used it would greatly arouse student interest during their elementary and secondary schooling, and would have a profound effect on the improvement of secondary education in the rural areas. The method suggested was for all MS5 students to take their examinations as usual, and if they desired to enter a faculty requiring other examinations, they should take those also, even though they were not necessary for secondary graduation. Students who were not in MS5 at the time, but had completed it in previous years, or who were enrolled in vocational or teacher education schools, were to take a special examination, with a score being the equivalent of the MS5 examination, thus providing some comparability. Based on past statistics, the committees recommended a quota of 60% from present MS5 students and 40% from other sources. An Aptitude Test should be developed for use by faculties and departments, but cannot be used until sufficient research has demonstrated its reliability and validity.

The reasons given by the committee for the proposed

change were as follows:

- (1) To give a greater importance to the MS5 examination.
- (2) To arouse student interest and raise the standard of education.
- (3) To foster and arouse an improvement plan for secondary schools in each region.
- (4) To decrease the number of part-time short courses. (coaching schools).
- (5) To make it fairer for every type of student.
- (6) To save time, labor, and money for the student and the government.
- (7) The method would give similar results to that used at the present time.⁷⁵

When the report of the investigation and Executive Committees was taken to the full National Education Council meeting, it was defeated by a 17-15 vote. Those who voted against it pointed to disagreement on the part of several of the committee members, and said that if the committee itself was not convinced of the change, the subject was in need of further study.

In 1968, the Joint Higher Education Entrance Examination is to be given once again in addition to the MS5. An Aptitude Test has been developed and has been tested, but will not be used this year in deciding a candidate's qualifications to enter the University.

The MS5 examinations, as was mentioned earlier, are given at the end of a students secondary work, in the

⁷⁵National Education Council, minutes of meetings of January 26, 1967.

beginning of March. There are three separate groups of examinations, depending on a students program: science, arts and general.

The MS5 examination in the sciences has the following breakdown of tests with a total possible score of 1000 points. A student must obtain a score of 500 total to pass. In 1967, 59% of the students sitting for the examination passed.

Table 3.5

Possible Points on Each Section of the MS5 Examination

Thai	2 exams	70 + 50 *	= 120
English	2 exams	100 + 70 *	= 170
Social Studies	3 exams	35 + 35 + 50 **	= 120
Mathematics	6 exams	60 + 20 + 20 + 50 + 40 + 50 **	= 240
Physics	2 exams	70 + 70 **	= 140
Chemistry	1 exam	70	= 70
Biology	1 exam	70	= 70
Practical	Exams in Science	35 + 35	= 70
Total Points			=1000

The questions for the examination are prepared by University professors in their respective disciplines at the invitation of the Ministry of Education. Selected teachers of high quality from the secondary schools are also invited to submit questions, but only University and Ministry of Edu-

*Indicates two tests: comprehension and grammar

**Indicates that tests in several areas of the subject matter are given

cation officials select the questions so as to keep any questions from getting out.

It is hoped that starting in the near future, the MS5 examination will be graded on time, so that only those who pass it would take the Joint Higher Education Entrance Examination. Last year the unique situation arose with some 118 students taking the Joint Higher Education Entrance Examination and passing it, only to find that they had failed to pass the MS5 examination for secondary education.

The MS5 examination is the only basis for secondary graduation in Thailand. Daily work, mid-year examinations, quizzes and classroom participation count nothing at the MS5 level. In MS 1-4, the mid-year examination and daily work count anywhere from 0-50% of the final grade, depending on the institution. Those institutions with Americans on their staff or which were started by missionaries generally tend to give a greater percentage of the student's grade for daily work, than the more traditional and often British-oriented secondary schools. Examples of this are the Wattana School, a private school started by American Presbyterian Missionaries, which gives 50% credit for daily work and other examinations. The other extreme is the Suankulab school, a government secondary school which gives only 20% credit for the mid-year examination, with no credit for daily work.⁷⁶

⁷⁶Interviews with teachers and headmasters at several Bangkok secondary schools.

The importance of the MS5 examination and the Joint Higher Education Entrance Examination is seen in the fact that most Thai secondary schools spend from 6-8 weeks at the end of every school year preparing for these all-important examinations. In some schools almost one-third of the classroom time is given over to the review for and taking of examinations. The examinations are not only important for the student, whose future depends on his success, but also for the teacher who is often rated and given special promotions if his students do well on the examination. The other factor used in analyzing a teacher's performance is whether he completed the assigned syllabus in the proper length of time.

Both the MS5 and the JHEEE are considered to be somewhat factual in orientation, though most consider the MS5 to be more of a memory testing examination, while the JHEEE is considered to test the thought processes to a greater extent. A study comparing the questions asked on both examinations has never been conducted, as far as one can ascertain. A study of the scores on both examinations, conducted in 1967, found the distribution of scores to be similar on both examinations though they were higher on the MS5. Another comparative study was conducted on the number of examinations and time spent in each subject area on the examinations. The study found that the MS5 is a much more comprehensive examination, giving a student a much greater chance to demonstrate his knowledge in more

aspects of a subject field.⁷⁷

Students may retake the MS5 a second time if they fail it the first time. This examination can be taken at the mid-year or at the end of the next school year. Students may repeat the JHEEE as many times as they wish. A real problem has arisen, however, in the fact that many students, particularly in the sciences wish to change faculties at the end of their first or even their second, third, or fourth years. This is particularly true of students wishing to go into medicine, who are assigned to a regular science course, dentistry, pharmacy, or some related area. These students will often retake the JHEEE after their first year in university, and attempt to get into the medical faculty. If they succeed, as many do on the basis of their further schooling, they must begin all over again in the new faculty often repeating many if not all the courses they had successfully passed in their previous year's work. In some cases, formal or informal, transfer is allowed without repetition. At the present time, there is no provision for transfer from faculty to faculty within the same university, much less between universities.

(The attitude which students take towards examinations in Thailand is well summarized, though probably exaggerated by this quotation from Mai Pen Rai, a book written by an

⁷⁷Kamhaeng Balankura, Interview in Bangkok, March, 1968.

American teaching at Chulalongkorn University on her experiences in Thailand.

In Thailand...education has a pathetic and tremendous significance to the family. The Thai have a passionate belief that education will rescue their people from a sea of troubles. A failure in college means the most exaggerated sorrow in the home and the student is drowned by an almost unbearable sense of having betrayed his family, his university, his country and his king....Three weeks before examinations the jolly Chula campus becomes a dark acreage of the deepest melancholy. The friendly smiles and clusters of students gloriously doing nothing vanish. In their place bedraggled groups of young people with bloodshot eyes, dark circles, tense and frowning faces...worry, gloom and threat of destruction blanket the whole Chula compound.⁷⁸

Recommendations based on the author's research in Thailand and his own experiences in the field of admissions are made in Chapter VI.

⁷⁸Carol Hollinger. Mai Pen Rai Means Never Mind. (Boston: Houghton Mifflin Company, 1965), p. 98.

Chapter 4: Design

The Sample

The NEC in Thailand has charge of the university admissions for ten institutions of higher education. In 1967-1968, 8,231 students were admitted to these institutions on the basis of their examination scores and their choice of individual faculties. Due to the intense interest in the development of the pure sciences and the need to limit the size of the sample, it was decided to take only those in the pure-sciences at Kasetsart, Chiangmai and Chulalongkorn Universities. (Other institutions teach courses in engineering and agriculture, but only these three offer bachelor's degrees in the pure sciences.) It was also felt that it would be of more value to study determinants of performance within curricular groupings than to compare averages across disciplines.

Of the 8,231 first year students, 428 were enrolled in the faculties of science: 157 in Chulalongkorn day classes, 54 in Kasetsart University, and 121 in Chiangmai University. Those students for whom biodata was missing were dropped from the sample, and students who withdrew from school before the end of the year were also eliminated, so that the final sample consisted of 368 first year students. Table 4.1 specifies the nature of the sample.

Table 4.1

Variable	Number in Each Category
1. Sex	Male-198, Female-170.
2. Age	15-0, 16-9, 17-56, 18-142, 19-97, 20-46, 21-7, 22-7, 23 and older-4.
3. Race	Thai-274, Chinese-94
4. Rural-Urban	Bangkok-121, Thonburi-32, Chiengmai-21, Rest of Country-194.
5. Parent's Occupation	Proprietor or Self Employed- 233, Government Official-74, Employee-14, Agriculturalist- 27, Other-20.
6. Type of Secondary School	Private-189, Public-178, Vocational-1.
7. Attended Coaching School	Yes-225, No-143.
8. Choice of Faculty	1-32, 2-85, 3-73, 4-106, 5-58, 6-14.
9. Faculty	Chulalongkorn Day -137 Chulalongkorn Evening-79 Kasetart -49 Chiengmai -103 <u>Total</u> -368

The Instrumentation

For each variable appearing in the data, a rationale for its inclusion in the study has to be offered, in addition to any other essential information which has a bearing upon the problem.

Sex Many studies of academic prediction have failed to control for the sex of the subjects, but those that do, generally point to a higher achievement level by females.

This has not been tested in Thailand, and the changing role of women in Thai society makes it a topic of great importance. Individuals at the highest levels in the Thai government have recently suggested the curtailment of women's higher education, even though no studies have been done on female achievement or on following-up the women after their graduation from the university.

Race Subjects were differentiated by race because the anthropological and sociological studies of Thailand have pointed to the differences of the Thai, Chinese and Malay populations, but no studies of academic achievement have ever been conducted using this as a variable. It must be recognized from the outset, however, that the achievement by any person is the operation of socio-economic status, low educational level of parents and other factors than innate qualities peculiar to the race itself.

Environment Many factors in a student's environment affect his attitudes and abilities. The concern here is with the difference in performance of students from rural homes and those from urban homes, and with the differences in performance of students whose parents are in government, business, employed in the money sector, or in agriculture. Other factors discussed, but not analyzed from a statistical viewpoint are religion, parent's educational level and parent's income.

Age Age is an important factor because over-age students have often failed one or more grades, while under-age

students may have skipped a year. Similar studies have pointed out the importance of this variable in the achievement level of students.

JHEEE The scores on the JHEEE are dealt with, because it is the final determinant of a student's admission to a university. In most previous studies, the student's total score was dealt with and low correlations were obtained. In this study, however, scores by individual fields are analyzed along with the total scores, to achieve a higher level of correlation.

MS5 Examination In the past two years there has been much agitation to get the NEC to use the MS5 Examination as the basis for university admission. For this reason, an analysis of its validity as a predicting device is in order.

Coaching Schools Thailand, like many other countries which depend heavily on examinations for selection purposes, has found that private coaching schools have sprung up. These schools are attended by many thousands of students, yet no studies have been conducted to see what role they play in a student's passing the examinations.

Public and Private Schools No comparative studies of university achievement by graduates of public and private schools has been conducted in Thailand. The importance of this is seen in the fact that over 50% of all secondary students are enrolled in private schools, and preliminary indications seem to show that they generally perform at

a lower level than students in public schools.

Choice of Faculty Students are allowed six choices of faculties and are admitted on the basis of their JHEEE score. No study has been conducted to see if students who are admitted to their first or second choice faculty achieve at a higher level than those who were admitted to a lower level choice, though this has been hypothesized by several Thai educators.

College Grades The basic yardstick of education is the judgement of the professors. In spite of all their shortcomings, no substitute seems to have been found for grades or marks. The ultimate criterion is success after college, but agreement of what constitutes success is hard to obtain, so there seems to be no better operational index of success in college than the attainment of a degree and its essential prerequisite, satisfactory grades. For these reasons, students' grades at the university were used as the dependent variables in this study.

Statistical Procedures

Two procedures were used in the analysis of the data. The first procedure tested the individual relationships between the independent variables such as sex, age or race and the dependent variables of achievement on the MS5 examination, the JHEEE or in the first year at the university. It was determined that a simple linear regression analysis would be most suited to this task. The correlation coefficient has the advantage of reducing the data to be

analyzed to a single composite figure which describes the overall relationship of two variables.

The second procedure was that of multiple correlation, also known as multiple regression, which tested the predictive power of the variables, when used in combination. For the purposes of performing the multiple correlation, only thirteen of the original 29 variables were retained: eight MS5 scores and five JHEEE scores. The biographical variables were dropped, as the purpose of the analysis was to test the predictive ability of the examinations. The total scores on the MS5 Examination and JHEEE were not used, due to the impossibility of using a summarizing variable on the computer. Multiple correlation procedures make it possible to consider several predictor variables at one time in predicting a given criteria. Under this method, the tests selected were given a specific weight and the student's probable success in college could be estimated by a mathematical formula.

Collection of Data

During the period from June to December, 1967, background information on Thai society and education was gathered to aid in a meaningful analysis of the statistical data which was collected from December, 1967, through March, 1968.

The biodata information on the science sample was obtained from the National Education Council and the National Statistical Office. Information on student

achievement was taken from student transcripts at the Registrar's office in the Faculties of Science at Chulalongkorn and Kasetsart Universities and the central Registrar's office at Chiangmai University. The scores on the JHEEE were gathered from records at the NEC and those on the MS5 examination from the Ministry of Education. Student achievement in the universities is based on the first grades they received. In Kasetsart University this means the first semester's grades, while at Chulalongkorn and Chiangmai Universities, it means the first years' grades.

Summary

The population of the study consisted of 368 students in the 1967 entering class in the Faculties of Science at Chulalongkorn, Kasetsart, and Chiangmai Universities. Biodata, examination scores, and university grades were collected for each student.

The variables used in the study included sex, race, residence, age, attendance at a coaching school, attendance at a public or private school, parent's profession, scores on the MS5 Examination and the JHEEE, and university achievement. Information on income, educational level of parents, religion and other significant factors was dealt with from a non-statistical viewpoint.

Simple correlations were used to test the relationship of the biodata to academic achievement, and multiple correlations were used to test the predictive ability of the

MS5 Examination and the JHEEE.

Chapter 5: Analysis of Results

Prior to dealing with the results of the study on each of the sociological and academic variables, an attempt has been made to give meaningful background information to aid in the interpretation of the data. This information is taken from the studies of historians, anthropologists, sociologists, political scientists and other researchers, who have written about Thailand. It is not meant to be an exhaustive analysis of all the available data on a particular topic, but rather a summary of those findings which are of importance to this study.

Sex Roles and Academic Achievement

The status of women in Thai society has always been fairly high when compared to other oriental cultures, and in recent years, due to universal education, Thai women have found themselves in an increasingly better position. In the lower class there may even be true equality between the sexes, but the upper-class women are more circumscribed socially. Women are found in all parts of Thai life, with many in the civil service and business, and an unusually high number in medicine. One observer credits Thai women with the important role of being the main bearers of acculturative changes in the social sphere because they have the most to gain by social change.¹

¹James N. Mosel, Thai Administrative Behavior (Bloomington, Indiana: Indiana University Press, 1957), p. 330. Taken from Toward the Comparative Study of Public Administration by William J. Siffin, ed., 1957.

Unlike many other cultures in Asia, the nuclear family is emphasized and extended kin relationships deemphasized. The Thai family has been characterized as being loosely structured. It is not unusual for a husband and wife to be teaching in different parts of the country, or for the husbands to be overseas studying. One couple, known to the author, was separated for four years with the husband going to the United States for two, followed by his wife for two more, while he returned to Thailand. Marriage is by preference, and divorce is quite simple. Child training emphasizes self-reliance and independence, and the threat of rejection or the actual disowning of children happens more frequently than in the West.

The role of women in Thai society is significantly affected by the Buddhist religion. If both men and women were maximizing their merit positions, this would put a real strain on the marriage, but the Buddhist goals of each are qualitatively different. A man's major merit-making is to become a monk, while a woman in giving a son for ordination obtains the greatest amount of merit.² Only men can achieve the highest Buddhist goal so they must be more sensitized to Buddhist norms. Women are more tied to "this worldly" concerns due to the limitations on their merit-making, so women are found in marketing, operating market and festival stalls, as well as having a major

²A. Thomas Kirsch, "Buddhism, Sex-Roles, and the Thai Economy," Bangkok: 1962, pp. 11-13 (mimeographed.)

voice in household financial affairs. Women are thought to be rooted in the world by their nature, and not to have the masculine patience needed to achieve Buddhist goals. A woman can be calculating due to her orientation to the world. Kirsch concludes that:

Although the factor of the Thai Buddhist orientation to action may be only one of the factors operating in a highly complex situation, it is one that will have to be taken into account in any plans for the economic development of Thailand. The present analysis suggests that important and far-reaching changes will have to take place in the Thai value system, changes that will affect the place of Buddhism in Thai society and the pattern of sex roles....The allocation of "This Worldly" concerns in particular economic roles to women, has allowed men to maximize their specializations in terms of merit-mobility and "other Worldly" concerns.³

Due to rapid social change there is a growing conflict and confusion in the area of relationships between the sexes. Young people, in particular, are torn between old standards and new desires. Several factors, in addition to education, have contributed to the new role of women in Thai society: the world-wide improved status of women, improved world communication, Western cultural patterns, a romantic love ideal, expanding employment opportunities, and the breakdown of rigid status groups.

The following occupation chart gives some indication of the role of women in Thai society today:

Occupational Groups in Thailand

Chinese Dominated Thai Men Dominant

Business clerks, carpenters, furniture makers, repairmen, machinists, metal workers, miscellaneous technicians, builders, sailors, barbers, unskilled labor.

³Ibid., pp. 29-32.

Chinese Dominated Thai Women Dominant

Large bus owners, managers; small bus owners, managers; tailors, jewelers, miscellaneous craftsmen, market sellers, weavers, dyers, shoemakers, hotel and restaurant employees, actresses, hawkers, petty market sellers.

Thai Dominated Thai Men Dominant

High ranking government official, high status professionals, high office staff, lower government officials, government clerks, high status industrial staff, auto, truck and bus drivers,

Thai Dominated Thai Women Dominant

Lesser and semi-professional, cooks, bakers and food processors, hairdressers, farmers and fishermen, market gardeners, low status domestic and service.⁴

Of the five economic oriented occupations, all occur in the Thai Women Dominated section.

In a recent study, 75% of the women interviewed were employed either full or part-time. It is now more socially acceptable for a woman to work, and the opportunities in developing businesses and industries are very great today. In a survey of university students, ~~70.6%~~ of the men and 85.9% of the women felt that a woman should have a career.⁵ With the increased cost of living, many women are forced to work to maintain and improve their standard of living, along with making an education possible for their children. With the desire on the part of modern Thai couples to live on their own rather than with their parents, come new expenses forcing the women out of the home to help make

⁴Ibid., p. 27.

⁵Alan E. Guskin, Changing Values of Thai College Students (Bangkok: Chulalongkorn University, 1964), p. 50.

ends meet. Even though Thai women have a higher status than women in other Asian countries, there are still unequal property rights and a double sex-standard, which Thai women are seeking to overcome.⁶

The great change in the educational level of Thai women is seen in these statistics on the percentage of men and women in each age group who are literate. Literacy has been defined as the ability to read and write in any language.

Table 5.1

Number of Literates in Thailand by Age Group
(10 years or over) and Sex in 1960⁷

Age Group and Sex		Percentage of Literates to Population
10-19	Male	88.6
	Female	85.3
20-29	Male	87.2
	Female	77.3
30-39	Male	83.5
	Female	62.9
40-49	Male	71.8
	Female	29.9
50-59	Male	60.2
	Female	11.2
60+	Male	48.7
	Female	6.7
Unknown	Male	63.1
	Female	32.1
Total		70.8

⁶Henry M. Graham, "Some Changes in Thai Family Life," Bangkok: p. 9. (Mimeographed.)

⁷Manpower Planning Division, Fact Book on Manpower in Thailand (Bangkok: National Economic Development Board), p. 90.

At the university level, the rising enrollment of women is an evidence of the new role of the female sex in Thai society.

Table 5.2

Percentage of Women in Thai
Universities 1961-1966

Universities	1961	1962	1963	1964	1965	1966
Kasetsart	19.9	21.2	23.9	25.4	25.9	26.2
Khon Kaen	----	----	----	16.8	11.2	10.3
Chulalongkorn	39.8	38.3	41.1	42.1	44.2	43.5
Chiangmai	----	----	----	46.7	52.4	53.9
Thammasat	20.9	21.1	21.9	27.2	26.2	38.6
Medical Sciences	48.4	48.8	46.8	48.3	50.4	49.1
Silpakorn	28.4	32.0	34.5	36.7	36.1	32.6
Total	25.7	25.9	27.0	31.7	33.6	40.4

The percentage of women in the universities in 1967 was approximately 42.5%. There are societal causes for this rise as has been pointed out, but another important factor is the verbal facility and ability to memorize, which has aided Thai women to do well on the entrance examinations.

In the sample of science students there were 198 men and 170 women. No attempt was made to break down each individual faculty into men and women, as most of the analysis of the data dealt with the population as a whole.

Table 5.3

Correlation of Sex and Scores on MS5 Examination
for Students in Four Science Faculties

N = 299

Examination Subject	Correlation	Level of Significance
Thai	.34	.0005
English	.29	.0005
Social Science	.33	.0005
Physics	.31	.0005
Biology	.33	.0005
Chemistry	.28	.0005
Mathematics	.04	.435
Total	.12	.026

All of the correlations of sex with scores on the MS5 examination were positive, indicating that women performed at a higher level than the men. Six of the eight correlations were significant at the .01 level, with one other at the .05 level.

Table 5.4

Correlation of Sex and Scores on the JHEEE
for Students in Four Science Faculties

N = 368

Examination Subject	Correlation	Level of Significance
English	.05	.32
Mathematics	-.07	.15
Biology	-.06	.21
Chemistry	-.11	.02
Physics	-.29	.0005
Total	-.26	.0005

Five of the six correlations of sex with scores on the JHEEE were negative indicating that the men performed at a higher level than the women. It is also important to note that the correlations are much lower than on the MS5 examination. Women performed at a higher level on the one examination requiring verbal rather than mathematical or scientific skills.

The grades received at each of the universities shown on Table 5.5 are treated separately, because of the differences in grading systems, and the difficulties connected with drawing any meaning from data which is not comparable. Women outperformed the men in three of the four faculties, with the highest correlations between the female sex and achievement being obtained in the Chulalongkorn Day Science Faculty. In Kasetsart, the men outperformed the women in three out of five subjects and in their overall grades, but only in physics and English were the levels of achievement significant. Women consistently performed at a high level in English, once again pointing to the ability of women in verbally oriented subjects.

Cultural Differences and Academic Achievement

Several important works have been published in Thailand dealing with the characteristics of three major cultural groups: Thai, Chinese, and Malay. It is of importance to this study to know something of the characteristics of each of these, as they bear directly on the drive for education and the achievement level of the students. The

Table 5.5
Correlations of Sex with University Achievement
as Measured by Grades Received

University	Subject				
	Chemistry	Biology	Physics	Mathematics	English Total
Chulalongkorn Day	.38**	.52**	.25**	.37**	.38** .49**
Chulalongkorn Evening	.12	.31**	-.07	.03	.25* .16
Kasetsart	.07	-.03	-.49**	-.26	.34** -.16
Chiangmai	.16	.22*	.14	.14	.25** .26**

* = significant at the .01 level

**= significant at the .05 level

negative correlation means higher achievement by males.

figures for 1965, place the size of the racial groupings as 82% Thai, 11% ethnic Chinese, and 7% Malay, Cambodian, Indian and tribal.

Thai Basic Thai values were developed in a rural society, but have been upheld by the urban population. People should be modest, respectful to elders and social superiors, generous, hospitable, self-reliant, moderate and serene. The ideal man is the Buddhist monk, who has given himself to personal discipline, meditation, and virtuous behavior, while the ideal woman is one who is obedient to and respects her husband, is a business expert and devout Buddhist. Peacefulness, mildness and non-aggression are important personal values. One may be educated, industrious, and generous, but is not a good man unless he is peaceful.⁸

The Thais have an almost uncanny ability to assimilate those living in their midst. This has led to a fairly homogeneous society, despite many tribal groupings in the north, the Chinese in the cities, and the Malays in the south. Thais have a deep loyalty to the Crown and a sense of membership in the nation-state, and almost all are Theravada Buddhists. They have:

...a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity practicality, and a moral (as contrasted with the natural) ordering of the universe.⁹

⁸Foreign Areas Studies Division, U.S. Army Area Handbook for Thailand (Washington: Government Printing Office, 1963), pp. 135-139.

⁹Herbert P. Phillips, Thai Peasant Personality (Berkeley: University of California Press, 1965), p. 16.

People tend to avoid unhappy or emotionally charged situations. To be cool-hearted and uninvolved are general Thai values, along with the contrasting but not conflicting Buddhist virtues of emphatic joy, loving kindness and compassion for others.¹⁰ Unlike the Japanese or New England Puritans, work is not seen as good in itself. Pleasure and enjoyment are the important characteristics. The Thais have been characterized as having an almost determined lack of regularity, discipline or regimentation. Obligations are recognized, but are not supposed to burden the individual unduly. The culture gives great importance to the individual, and his right to act as he sees fit.¹¹

The Thai family structure is of great importance in the society. It has been characterized by many sociologists as being a loosely structured family in which new members are added or leave at any time. Some children wander from place to place spending their childhood in several different families. It is not uncommon to find families which have just disintegrated.¹² Many children are sent to Bangkok for schooling, and it is not uncommon for a husband or wife to leave for several months to work in another part of the country. Family difficulties are increased by the taking of second wives by many of the wealthier Thais, and also

¹⁰Foreign Areas Studies Division, op. cit., pp. 140-141.

¹¹John Embree, "Thailand: A Loosely Structured Social System." A reprint from the American Anthropologist, Vol. 52, #2 (April-June, 1950), pp. 2-4.

¹²Phillips, op. cit., pp. 25-26.

the fairly widespread prostitution which exists.

The psychological and motivational effects of this type of family life cannot be underestimated. With the looseness of the family structure there are many instances of poor care, exploitation, rejection by foster parents, deprivation of education, and a lack of secure roots. The breakdown of traditional patterns of care for needy relatives and friends is throwing the needy on their own and increasing dependence on the state or begging.¹³

Principles of child care are: do everything for them; protect them from danger; entertain them. Thai children are seldom seen crying or acting up, and the adult Thais lack of resourcefulness, inventiveness, and ability to think and reason independently have been attributed by some authorities to the child's lack of opportunity to develop his interests and skills.¹⁴

The peasant child is anything but a "tabula rasa" at birth. He enters the world with a stock of merit or demerit from previous lives, which will affect his being in this life. A child can be taught virtue and good habits, but prenatal characteristics are the basic determinants of his life. Child raising thus takes one of three paths. The parents surrender to what they think are the child's predetermined traits. The parents attempt to overcome

¹³Graham, op. cit., pp. 20-21.

¹⁴Ibid., pp. 17-18.

these traits, or they let the child grow up as he wishes.

Phillips concludes that:

The parents lack of genuine concern is not lost upon the child...(parents) proceed on the simple assumption that if people, including children, do not do what you ask them, they have good - and more important, private - reasons for responding that way; there is no need for, or interest in self justification.¹⁵

Many problems face the Thai family, many of which are due to pressures of modernization. With the changing religious outlook, there is a void to be filled. The increased cost of living creates new tensions. The old ways of child rearing and mate selection are being challenged, and all the problems of the rural person in an urban environment cause new marital difficulties. Rapid social changes have produced strains between the generations. The young have a different outlook and expectations. The old, due to their traditional authority, tend to dominate, and when the young see this coming from persons inferior to themselves in certain respects, tensions and conflicts arise. These conflicts tend to arise more often in lower class youth who are upwardly mobile, and whose parents are, in general, more traditional in outlook.¹⁶

In traditional Thai culture, the ability to dupe someone successfully or to tell a lie without being caught

¹⁵Phillips, op. cit., p. 35.

¹⁶Udyanin Kasem and Praset Yamklinfung, "Family Status and Parent Youth Relations," The Journal of Social Sciences Vol. 1V, No. 1 (January, 1966), p. 21.

is praiseworthy. Corruption in Government or in business is generally accepted and even admired as long as one does not get caught. This has changed some in recent years, but is still quite prevalent.

The Thai culture is a shame culture rather than a guilt culture, and social controls operate largely through this mechanism. Shame is felt when one fails, and it is perceived by others, or when one loses dignity in the eyes of others. The converse of shame-avoidance is the great value of 'looking good' in the eyes of others, even though it is only outward and superficial.¹⁷

When it comes to education, the Thais, for the most part, lack the Chinese and Japanese drive for learning. The overseas degree is of great value, and attending the best university in Thailand is of real importance, but what is actually learned is of little importance. It is the symbol which is important. The Thais lack the aggressiveness of some of the other Asian cultures, and this may be due in part to their national heritage of many centuries with no colonial experience to make them lose confidence in themselves. This self-confidence has been an important factor in the ability of the Thais to assimilate the large Chinese population.

It is no exaggeration to say that the cultural current of Thai history in recent centuries cannot be properly understood or analyzed apart from the changing position of the overseas Chinese.¹⁸

¹⁷Mosel, op. cit., p. 302.

¹⁸G. William Skinner, Chinese Society in Thailand: An Analytical History (Ithaca, New York: Cornell University Press, 1957), p. v.

Chinese The following chart gives an indication of Chinese population, not only in Thailand but in each of the South-east Asian countries.

Table 5.6

Chinese in Southeast Asia: 1965¹⁹

	Thousands Ethnic Chinese	Total Population	% Chinese
N. Vietnam	190	17,750	1.1
S. Vietnam	860	16,120	5.3
Cambodia	425	6,250	6.8
Laos	45	2,500	1.8
Thailand	2,600	30,500	8.5
Burma	400	24,800	1.6
Malaysia	3,310	9,600	34.5
Malay Penin.	2,920	8,275	35.3
Saravak	275	820	33.3
Saba	125	505	24.8
Singapore	1,400	1,807	74.9
Brunei	25	95	26.3
Indonesia	2,750	107,000	2.6
Philippines	450	32,300	1.4
Port Timor	5	565	.9
Total	12,470	249,350	5.0

¹⁹W. E. Wilmott, "The Chinese in Southeast Asia," Australian Outlook, Vol. 20 No. 3 (December, 1966), p. 254.

By ~~and~~ large, there have been fewer and less serious problems with the Chinese minority in Thailand than in any Southeast Asian country. The dominant note has gone from cooperation to assimilation. This is not to say, however, that the Chinese and Thais have merged completely or that there has never been and is not today any prejudice.

Commercial trade between China and Thailand was carried on for many centuries, and Thailand paid tribute to China from the late 13th century to the middle of the 19th century. Chinese began settling in Thailand as early as the 16th century, but the number had only reached 3000 by the end of the 19th century. Most of the settlers were men who took Thai wives, and by the third generation the Chinese were thoroughly assimilated into the Thai culture.²⁰ The Chinese left their homeland with the aim of making a fortune which could be returned to China. This motivated the immigrants to enter a profession which would involve a minimum of fixed investment in the host country and a maximum of liquid assets which could be returned to China. Trade was the logical profession and in this they found little competition, as the indigenous populations were predominantly peasants, and the aristocrats based their wealth on tribute, not trade.²¹

²⁰Belen Tan-Gatue, Chinese and Chinese-Thai Relations (Ithaca, New York: Cornell Southeast Asia Program, Far Eastern Studies, No. 601 - Fall, 1966), pp. 1-2.

²¹Wilmott. op. cit., p. 253.

The Chinese were favored up to the end of the 19th century, because they controlled the opium, gambling, lottery, and liquor businesses, which brought in up to 50% of the government revenue. At the start of the 20th century, an important change took place in the immigration, as Chinese women came to establish Chinese homes and to direct the sympathies and loyalties of their children to China. Chinese schools opened to teach Chinese literature, patriotism and traditions. Funeral and benevolent societies, a Chinese Chamber of Commerce, and numerous language associations were organized, all of which halted the process of assimilation into the Thai culture. A strike and boycott by the Chinese in 1910, first showed the Thai the extent of Chinese control of the economy.²²

Laws to control the Chinese were put into effect during the First World War. These laws touched all areas of Chinese life, but only those affecting education will be touched on here. The Private Schools Act of 1918 required all schools to register with the Ministry of Education and to teach Thai three hours a week. All principals were to meet Ministry requirements, and all alien teachers had to pass Thai exams.²³ The number of Chinese schools rose sharply from 48 in 1925 to 271 in 1933. In that year a Compulsory Education Act led to strict inspection and a limit of seven hours per week of

²²Tan Galue, op. cit., p. 2.

²³Ibid., p. 5.

instruction in Chinese. Many Chinese hired tutors or sent their children to China for education, and those in border areas sent their children to Burma, Laos, Cambodia or Malaya. Other children were sent to mission schools, where they could learn western languages, receive a high quality of instruction, receive commercial instruction, and be under strict discipline.²⁴

Following World War II, there was a resurgence of Chinese education with over 175,000 pupils enrolled. In 1948, however, Prime Minister Phibul closed all Chinese secondary schools, so that since that time, Chinese secondary education has been limited to elective courses in one or two Thai middle schools and a few evening schools in Bangkok. Attempts were made to cleanse the rest of the Chinese schools of political influence, to Thai-ify their staffs and curricula, and to limit their financial base. In 1952, there were anti-communist raids conducted in the Chinese schools, with principals and teachers jailed and schools closed. Those schools allowed to remain open were put under the strict supervision of police officers.²⁵

By 1962, only 211 Chinese primary schools remained, enrolling 83,606 pupils, and a similar number exist today. Most of these teach Chinese only six hours a week, and their graduates cannot read or write Chinese well enough for

²⁴Skinner, op. cit., pp. 227-230.

²⁵Ibid., pp. 265-267.

practical use. Almost all of the teachers in these schools are now Thai, and the textbooks are strictly controlled, so as to prevent any teaching of communism or excessive Chinese nationalism. The following quotation from Jacques Amyot sums up the state of Chinese education in Thailand today.

An important force in the changing nature of Chinese Education is the realization on the part of Chinese parents that success in business comes from ability to adapt to the Thai cultural milieu. If any second language is to be learned, English is preferred to Chinese. In the modern business world of the Thai-Chinese, a Chinese education is more of a handicap than an advantage.²⁶

It is difficult to say if the government of Thailand followed the best path in its suppression of the Chinese schools. Its goal of assimilation was and is a worthy one, but the method used led to a strong intensification of ill feeling and suspicion between the Thai and the Chinese and a strengthening of Chinese in-group feeling. Possibly a better method would have been to provide an attractive, high quality education in the public school with electives in Chinese language and history to attract Chinese students.

The Chinese family differs greatly from the Thai. Family ties are of great importance, and kinship ties make a large, cohesive group bound by loyalty and mutual obligation. The Chinese family has contributed in no

²⁶Jacques Amyot, "Chinese in Thailand," (Bangkok, 1966), p. 17. (Mimeographed.)

small measure to the conservation and propagation of traditional values. In addition to the family, there are still hundreds of associations of individuals with similar familial, economic, social and religious interests. Unlike the extreme Thai individualism, the Chinese use social pressure to cause the wayward to conform.²⁷

The role differences between the Chinese and the Thai families is well summarized in the following quotation:

...while the family is regarded among the Chinese as the keystone of society, monastic order and bureaucracy are regarded by the Thai as of greater value than family ties. Finally, whereas the Chinese adopt a Confucian organization of the family with roles and status based on generation, sex and age, the Thai adhere to a family organization with considerable room for freedom of individual behavior.²⁸

There is a tendency for Thais to polarize at the extremes of the socio-occupational structure, due to the institutionalized status of the Thais in the 19th century, which kept them in farming and gave the Chinese the personal freedom and geographical mobility for competition in economic ventures. The Bowring Treaty of 1855 worked to confirm the Thai masses in their preference for rice cultivation and subsistence farming, and also strengthened the Chinese hold in commerce, industry, mining and wage labour.

²⁷Ibid., pp. 6-8.

²⁸Chomchai Prachom, "Trends Report of Studies in Social Stratification and Social Mobility in Thailand," East Asian Cultural Studies, Vol. LV, Nos. 1-4. (March, 1965), p. 192. A review of Double-Identity - The Chinese in Modern Thailand, 1960.

The social classes in Thailand are not fixed. Thai society facilitates assimilation because the pattern of association is weakly developed, so a Chinese has few rigid in-group boundaries to crash in order to relate to the Thais. Social grouping is fluid and open. Prejudice against the Chinese is more against the group and their economic domination than against individuals; against a style of life, not the race.²⁹ Eight social classes have been defined as follows:

Social Classes in Thailand

1. The royal aristocratic and old-time bureaucratic families form the traditional elite, and are characterized by wealth based on real estate, high education attainment, high respect or prestige and high devotion to old-elite traditions.
2. The new elite are the descendants of pre-modern bureaucrats, and some from pre-modern aristocratic class, the freeman class, and the Chinese business class, based on wealth from business and government, high political power and high educational attainment. Members are government bureaucrats, military brass, Chinese business and financiers, and many professionals.
3. Chinese middle class whose class interests are commercial wealth and maintenance of Chinese ways. Much overlapping with Thai businessmen.
4. Thai middle class - government employees, small entrepreneurs, teachers, newspapermen, clerks, secretaries and other white collar.
5. Chinese artisan class.
6. Thai artisans - chauffeurs, drivers, technicians, hairdressers.
7. Thai lower class - pedicab drivers and domestic servants.
8. Chinese labourers class - hawkers, barbers, actors and unskilled laborers - now being replaced by Thai from provinces.³⁰

²⁹Nesa Vichapand, "A Study of the Factors Effecting Prejudice and First Impressions," (Unpublished Master's Thesis, Chulalongkorn University, March, 1964), p. 42.

³⁰Chomchai Prachom, op. cit., p. 194. A review of G. William Skinner's Chinese Society in Thailand.

In recent years the Chinese have been crossing over into semi-governmental positions and many second generation are entering the civil service. They are also moving into ownership and management of big business and finance formerly reserved for Europeans. The Thai in turn are becoming businessmen, artisans, proprietors of small shops and clerks in Chinese offices.

Status for the Chinese has been defined primarily in terms of wealth, whereas for the Thai it is found for the upper classes in relationship to royalty and landed wealth, and for the rest in bureaucratic positions, family membership and faithfulness to Buddhist principles.

Malay The third racial and cultural group to be dealt with is the Malays in Southern Thailand. They do not form nearly as large a minority group as the Chinese, but have been more difficult to assimilate due to their Moslem faith and Malay ties.

Education for the Thai-Malays begins at age six or seven when the children begin to memorize the Koran, learn religious principles and the Arabic script with the village Imnam for two to three hours each morning. Students are expected to attend the government school for the rest of the day. Considerable lip service is paid to the value of education in competing outside the Malay villages, but parents rarely insist on their children attending school. Much of the resistance to education is due to conservative Muslim elements, who feel that education makes children

irreligious.

Literacy enables man to disobey God. Civilization is antireligious....The village attitude toward a student who seriously pursues secular education is that he is losing a certain amount of his religious strength, that he is being contaminated by alien (Buddhist) ideas to his ultimate detriment.³¹

The problems of poor teachers, different language, and lack of classrooms, in addition to the costs of education do not promote the cause of public education in the Malay villages. Even though a secondary education is the key to upward mobility and equal footing with the Thai, very few students attend. The Malay object to the cost of secondary school which comes to approximately \$30 per year, and yet send 80% of their sons to the Pondok (Moslem Secondary School), where the costs are over \$75 per year. The training in the Pondok is basically religious with little liberal education or practical training.³²

The statistics on the number of university entrants from racial groups other than the Thai and the Chinese gives strong backing to the view that education is not as important to the Malay and other minority groups. Out of 8,231 university entrants in 1967, 6,514 were Thai, 1,961 were Chinese, and only 20 were from other racial groups. The percentage of Chinese in the entering class was 30.1%, while they make up only 8-11% of the population at large.

³¹Thomas M. Fraser, Jr., Fishermen of South Thailand: The Malay Villagers (New York: Holt, Rinehart and Winston, Inc., 1966), p. 84.

³²Ibid., pp. 80-86.

Many second and third generation Chinese do not wish to be identified as such, and due to the large amount of inter-marriage between the Thai and the Chinese, the actual percentage of Chinese or students with some Chinese blood is no doubt much larger than the 30.1% who claim such a racial identity. Some of the more popular faculties for Chinese students are engineering, commerce and accountancy, and medicine. The Faculty of Medicine at the University of Medical Sciences is over 42% Chinese, and also happens to be the most prestigious and difficult to get into.

The Chinese not only have a proportionally larger group of students in the universities than the Thai, but they also have a higher rate of passing on the JHEEE, as is shown on the following table.

Table 5.7

JHEEE Rate of Passing by Sex and Race

Sex and Race	# of Candidates	# of Successful Candidates	Rate of Passing
Female	10,228	3,504	34.20%
Thai	8,836	2,864	32.41%
Chinese	1,374	530	38.57%
Male	13,679	4,727	34.50%
Thai	11,369	3,649	32.09%
Chinese	2,275	1,062	46.68%
Total	23,907	8,231	34.42%

The Chinese in the sample of 368 science students number 93 or 26.7% of the total population.

The direction of the correlations between race and scores on the MS5 examination and the JHEEE were positive, indicating that Chinese students generally performed at a higher level, but none of the correlations was significant at the .05 level. Similar results were obtained on correlations between race and university achievement. Once again the relationships were positive, indicating that Chinese students at the university performed at a higher level, but only at Chiengmai were the results significant at the .05 level.

Residence and Academic Achievement

Thailand, like most developing nations, is basically a rural society. Over 84% of the Thai labor-force is involved in agriculture, and there is only one major city, Bangkok, with a population of 1,200,000. This population figure also includes the twin city of Thonburi. There are several smaller cities in the 20,000 to 60,000 population range, but over 80% of the people still live in small villages. There are only 20 towns in the whole country with more than 20,000 people, in a population of over 30,000,000.

The importance of rural Thailand is also seen in the statistics that 4/5 of all students are in the elementary grades, and 80% of these are in village schools. Education then is more rural than urban, even though most secondary

schools and institutions of higher education are located in the cities. While the village population is more numerous, the influence and prestige are in the cities, so that there is a Bangkok perspective or bias. Bangkok and the provincial capitals not only have better working conditions, but also better chances for advancement and the chance for new jobs. Many have concluded that too large a proportion of Thailand's resources are consumed in Bangkok.³³

The Thai peasant is self-reliant and rather than being in sharp competition with his neighbors for status, he seeks individual prestige through serving in the temple, by being a renowned story-teller, a good farmer or a leader in the community.³⁴ He also has been characterized as one who is responsive, cooperative and complies with verbal requests and orders, but once a situation has been concluded, he does what he wants, often the opposite of that to which he has agreed.³⁵

While the urban dweller has taken on a more scientific outlook on life, with a resultant loss in religious fervor, the peasant still sees:

...all human intentions...forever set within a framework of cosmic, and particularly moral, unpredictabilities....To them, human volition represents only one of several indeterminants and uncontrollable factors giving rise to events.³⁶

³³Harold E. Smith, "Some Sociological Aspects of Thai Rural Education," (Bangkok: 1966), pp. 1-2. (Mimeographed.)

³⁴Phemchai Prachom, op. cit., p. 202

³⁵Phillips, op. cit., p. 79.

³⁶Ibid., p. 80.

The peasant, as a true individualist, seeks to provide well for his family and the temple, and in turn wishes to be left along.

Rural attitudes to education are of extreme importance if Thailand is to develop as a nation, and modern education is to make any headway. For peasants, farming was training in habit, and virtue was the deciding factor in the quality and quantity of one's crops. The learning gained at the Buddhist temple was the means of gaining this virtue, but few could be spared from the fields to gain much of this religious learning. Apprenticeships were available in some things, such as midwifery, temple repair, and boat building. The following quotation does an excellent job of summing up traditional rural attitudes to education, many of which can still be found today in Thailand.

The rationale for this system of learning rested on the peculiar concept of knowledge. Real knowledge was assumed to be both substantial and practical, like a tool which copes with one of life's difficulties. Without this knowledge or the aid of a practitioner, one was helpless as a person required to drive a nail without a hammer. The moral law, by showing how to mitigate suffering in life, also provided a formula for lending success to one's undertaking. Astrology, more particularly, assisted farmers to know the propitious day for planting or the hour for marrying off their daughters. Even in music, the Thai thought, not of developing a skill, but of instructing how to play a certain piece on a particular instrument. Similarly, one read a given book rather than learned to read, and, though having learned one book helped with the next, the knowledge of the book constituted the desired gain. Of course, parents trained children in desirable habits, and an individual might profit by experience, but these were not education. Education dealt with important knowledge which was discovered only by heroes or saints

not by ordinary mortals. Such knowledge had to be obtained from one who had received it through the chain of teachers leading back to the original hero or saint. This kind of knowledge alone was education. A teacher's reluctance to pass these often dangerous tools to unscrupulous hands, and a pupil's gratitude, followed from this view of knowledge. Nor did a teacher assume that knowledge per se equipped one to practice well; instead he was responsible for giving it to no one who might distort it or whose personal characteristics might jeopardize it.³⁷

The average Thai peasant has a fourth grade education or less. This is enough for him to read and write Thai, add, subtract, multiply, divide, understand Buddhism and gain some knowledge of neighboring countries. Most of what is learned, however, soon becomes a vague memory in the past, so that after several years away from school most of the skills and knowledge have been forgotten. A random sample of 100 villagers in Northeast Thailand, the country's most backward area, found an average yearly income of \$93. Eighteen percent of the people were without any education, only 2% had reached twelfth grade, one more had reached ninth grade, and most had four or less years of schooling. Only one person read the newspaper regularly, while 89 indicated they never read any.³⁸

One of the reasons for such a low level of education among the rural population is that once education has been attained, the person tends to leave the village and move

³⁷L. M. Hanks, Jr., "Indifference to Modern Education in a Thai Farming Community," Reprinted from Human Organization, Vol. 17., no. 2. pp. 9-10

³⁸The Asia Foundation. Report on the Socio-Economic Condition of the People of Northeast Thailand. March - April, 1963. pp. 1-7.

to the big city. Bangkok being the ultimate goal of most of them. Education is not so much a source of prestige as a means to a more remunerative and easier existence than can be offered by farming. ³⁹

Education is a means not an end. One can leave farming and receive respectable employment in Bangkok. As one farmer stated:

People who can read and write can't be cheated. They can manipulate figures and write wills; they can get non-farming jobs. ⁴⁰

Even the wealthier rural families do not see education as a must, believing their children have enough money to live comfortably, so don't need education to escape to the city.

Other problems face education in the rural areas besides the exodus of the educated to the cities. There are the usual difficulties of poor buildings, inadequate equipment and untrained teachers. A trained teacher is one who has two years of teacher training after 10th grade, yet in 1957, approximately 70% failed to meet this qualification, and today there is still a high percentage of untrained teachers in the classroom. Another problem is the high percentage of repeaters, which in 1950 reached a peak of 50% of all 1st graders. The percentage has dropped since

³⁹Chomchai Prachom, op. cit., p. 200. A Review of Howard Kaufman's Bangkhuad - A Community Study in Thailand, 1960.

⁴⁰Howard Kaufman, Bangkhuad - A Community Study in Thailand (Locust Valley, New York: J. J. Augustin, Inc., Publisher, 1960) p. 92.

that time, but Thailand still must solve this problem.

The curriculum tends toward fact-cramming and is almost entirely academic. The teachers may have a syllabus and a few texts, but seldom are there details for a working program or suggestions on how to teach particular subjects. Lessons are repeated in unison and memorized from the blackboard. Absenteeism is another problem facing most rural schools. In the dry season some schools have reported 70% of their students as absent. For many years, the law stated that after a child's absence for 15 days in a row, the parent could be prosecuted, so parents got around the law by sending them back every 15th day.

The cost of books, pencils, paper, uniforms, and transportation is high for a poor farmer, and often limits a farm family to sending one boy for schooling. For the most part the books are dull, poorly written, and contain few if any attractive pictures or illustrations. A lack of rapport between principals, teachers, changwat and provincial offices, and the local population often leads to low morale and a low quality of education. The local Buddhist abbots generally control the collection of money for the local schools, and this is often a source of difficulty.⁴¹ For every five baht or five baskets of rice given to the temple, the school only gets one.

Examinations and the preparation for them take up much of the school year, and pupils will often fail to

⁴¹Ibid., p. 85-86.

show up for the annual state tests. One teacher expressed the problem with parents:

When I ask parents to help their children by doing home reading and things like that, they say, 'Don't ask me to do that. It's your job. What are you being paid for?' So there is no cooperation from parents usually but some parents are helpful.⁴²

The teacher is caught in the middle of trying to enforce the edicts of the ministry, but must avoid antagonizing the community. The extreme centralization of Thai education leads to some inefficiencies. The teacher is the closest government official to the people, and as such, takes much of the praise or abuse of the people directed towards the government.

A major problem which has begun to confront the rural schools is the impact of the vast American presence in Thailand. With over 43,000 military personnel and many thousands of civilians, the Americans need vast numbers of Thai interpreters, office helpers, supervisors and other educated individuals. Most of the American bases are in rural areas, and most of the educated Thais in the area work either as teachers or for the government in some capacity. With the higher wages being paid by the Americans, the schools are being stripped of their teachers and government agencies of their officials. The United States has put a large amount of money into various parts of the Thai educational system, but through its present policy, it is

⁴²Hanks, op. cit., p. 13.

in the process of undoing much of the good that may have been accomplished in the past.

The sources of indifference to education by the rural population are of real importance. Some of the causes already presented are a lack of teachers and equipment, and the high cost of education for a peasant with such an annual income of under \$100. Some other causes are that modern schooling does not conform to traditional assumptions concerning education; that much of it is functionless in the eyes of the community; that it should be more practical, paying more attention to the needs of the farmer, and that modern education fails to teach morality.⁴³

The purpose of this discussion on rural life and has been to give a brief introduction to the life of the peasant and to the educational problems facing Thailand, in order to provide a perspective from which to look at the following statistics on the occupational and residential background of Thai university students.

The urban bias in the educational system is seen in the figures that 5711 of the 8231 entrants to the university in 1967 were from an urban environment, defined as living in or near a town of 20,000 or more. Only 2520

⁴³Ibid., p. 14.

were from rural areas, which have a population 12 times greater than all the cities of Thailand. Using these figures, it has been computed that an urban student has a 25 times greater chance of getting to the university than does a student from a rural environment. Not only does a child born into an urban environment have an initial advantage over the rural child, but he also has a better chance of passing the JHEEE for university admission. Candidates from urban areas had a 35.93% passing rate while rural candidates had a 31.44% rate. Students from Chiangmai, Thailand's third largest city had a passing rate of 47.30% and Bangkok had a 41.41% rate.

Another interesting approach to a study of educational opportunity in Thailand is a breakdown by areas of the country. The country is often divided in five areas: North, Northeast, Central, South and Bangkok-Thonburi. Based on the size of the total population and the number of university entrants, the students from Bangkok had a six times better chance of getting into the university than students from the Central Plains or the South; a twelve times better chance than students from the North, and a twenty-four times better chance than a student from the Northeast.

Students are aware that their chances of gaining admission to the university are better if they can attend one of the schools in Bangkok-Thonburi or in some other city. Evidence of this awareness is the large number of

students who leave their homes before MS3, and go to school in other sections of the country. The following statistics are based on the 1967 candidates for university admission.

Table 5.8

Parent's Residence and Location of
School Where Student Finished MS⁴⁴

	Bangkok- Thonburi	Central	North	North- east	West	East	South	Abroad
Parent's Residence	7855	1736	2251	1501	1687	2256	1993	12
Finished MS ⁵	15,045	644	1049	790	471	522	770	--

These statistics show the high proportion of the education program for which Bangkok is responsible. It also shows the drawing power which the urban area has for students from the provinces. In the sample of 368 science students, 121 were from Bangkok, 32 from Thonburi and 21 from Chiangmai.

The results of the study do not indicate any great advantage for students from urban areas, with the exception of English, where significant correlations were obtained on the MS5 English test, the JHEEE English test, and in University English grades. This only means that of those students who entered the university there is no difference, but as has been shown previously, the rural student is at a severe disadvantage of ever attaining admission in the first place place.

⁴⁴Office of the NEC, Report: The Joint Higher Education Entrance Examination: Academic Year 1967-1968 (Bangkok: National Education Council, 1967), pp. 21-23.

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Table 5.9

Correlation of English Scores With Residence

University	MS5	JHEEE	University Grades
Chulalongkorn Day	.25**	.28**	.22**
Chulalongkorn Evening	.02	-.01	-.02
Kasetsart	.04	.01	.08
Chiangmai	.33**	.22*	.17
Total	.15**	.19**	---

* .05 level of significance

** .01 level of significance

In almost all subject areas the correlations were in the positive direction, indicating a slight balance in favor of students from urban areas, but the correlations were not high enough, with the exception of English, to show any strong bias one way or the other.

Occupational Groups and Academic Achievement

The occupation of the parents of the university students is an important factor in their ability or chances of gaining a university education. Thailand is basically a rural society with approximately 80% of its people still involved in farming or related occupations. Its manufacturing and sales sectors are expanding rapidly, but for many years to come, a majority will be dependent upon agriculture for their economic welfare and survival. The following chart gives an idea of the size of the various occupational groups and the trends.

Table 5.10

Occupational Groups in Thailand, 1954 and 1966⁴⁵

Occupational Groups	1954	1966
Professors, Technical and Related Workers	1.0	1.4
Administrative, Executive and Managerial	0.5	0.5
Clerical	0.7	1.3
Sales	3.7	6.7
Farmers, Fishermen, Hunters Loggers and Related Workers	88.0	79.8
Miners, Quarrymen and Related Workers	0.1	0.3
Workers in Transport and Communication Occupations	0.6	1.5
Craftsmen, Production Process Workers and Labourers Not Classified Elsewhere	3.5	6.4
Service, Sport and Recreation Workers	1.7	2.1
Not Classified Elsewhere	0.2	.0
Total	100%	100%

Ideally students from all types of backgrounds should have an equal or nearly equal chance of obtaining a university education. This equality has never been achieved anywhere in the world, and Thailand is no exception. Based on the number of people in the occupational group, an analysis of the statistics shows that the child of a government official has a 268 times better chance of being

⁴⁵Manpower Planning Division, op. cit., p. 22.

admitted to the university than does a child of a farm family. Children from families of those in manufacturing and industry have a 36 times better chance than a farm child. The following breakdown of parent's occupations was obtained for the 1967 university entrants.

Table 5.11

Occupation of Parents of University Students⁴⁶

Parent's Occupation	# enrolled	% of those enrolled
Proprietors and Self Employed	4508	53.72
Government Officials	2020	25.12
Employees	657	8.19
Agriculturalists	580	7.31
Others	437	5.31
Unknown	29	.35
Total	8231	100.00

No analysis by family income was made of the 1967 entrants, but a study done in 1964 gives some indication that there are not many students from poor homes in the Thai universities. With the average Thai income of around 200 Baht a month, the following figures show that the university students are definitely from wealthier homes.

Table 5.12

Monthly Income of Parents of University Students in Baht⁴⁷

	500 or less	500-1000	1000-2000	2000-3000	3000-5000	5000+	Unknown
Male	6.2	12.9	22.4	18.6	12.9	6.4	20.5
Female	5.1	7.8	14.5	23.7	19.0	16.7	13.1

⁴⁶Office of the NEC, op. cit., pp. 6-8.

⁴⁷Guskin, op. cit., p. 16.

Approximately 80% of the population make 500 Baht or less each month, yet only 5-6% of the university students are from this income bracket. Students attending teacher training insitutions are more often from poorer homes, but the totals, even there, find only about 20% in this lowest income group. It is interesting to note that girls, in general, come from wealthier homes. Several hypotheses have been given to explain this phenomenon. If a family can only afford to send one child on for higher education, they will usually send a boy, while the girls must remain home. Many boys from wealthy homes are sent overseas by the parents, this being particularly true of those who failed to gain admittance to Thai universities. Many boys are sent to military training schools, thus cutting down on their number in the university. Boys from wealthy families have been known to waste their time and fail to study hard, thus failing to gain admittance to the university. Boys from poor homes, on the other hand, realize that education may be their only hope of breaking out of their economic and social class, and thus are more highly motivated.⁴⁸

The passing rates of candidates from the various backgrounds is quite significant. Not only are there fewer children of farm families in the universities, but candidates from this background have the lowest passing

⁴⁸Ibid., p. 15.

rate on the JHEEE. Candidates who are from the families in the employee category have the highest passing rate. The causes of this are difficult to find, but the high motivation of intelligent students from lower class urban families may be a factor.

Table 5.13

Percentage of Successful Candidates
Based on Parent's Occupation

Parent's Occupation	% of Candidates Successful on JHEEE
Employees	40.01
Proprietors and Self Employed	37.74
Government Officials	31.05
Agriculturalists	24.59
Other	_____
Total	34.42

Perhaps more significant than the occupation of the parents is the occupational preference of the students. In the same 1964 study of students in Thai higher educational institutions, the occupations which were chosen by men and women are found in Table 5.14 on the following page.

Another question asked in the same survey dealt with the occupational importance that students attached to various positions. The teaching profession ranked first for several reasons. There was a large number of future teachers in the sample, and the teacher is a highly respected community leader. Thailand has been placing a

Table 5.14
Career Choices of University Students⁴⁹

	Teacher	Artist	Military/ Police	Medical Doctor	Natural Science	Business	Farmer	English/ Architecture	Government	Don't Know	Other	No Answer
Male	23.6	1.2	1.2	26.5	15.5	6.0	3.3	3.6	7.6	6.9	2.6	1.9
Female	54.1	2.0	1.2	13.5	7.3	5.3	1.8	.0	7.3	7.3	4.3	1.2

⁴⁹ Ibid., p. 51.

great emphasis on education in recent years which has improved the image of the profession, and for the most part, the students accord a very high status to their professors. The medical profession ranked high for some of the same reasons that it does in other countries: the high prestige of a man who controls life and death, the financial rewards, and the freedom and independence of action offered by the profession. The other positions in order of occupational contribution were priest, soldier, government official, farmer, merchant, laborer, royalty.⁵⁰ The low prestige level and lack of importance attributed to farming in a country which is still made up of 80% farmers, is highly disturbing, though quite expected from a high educated population, made up of so few students from farming homes. The bias against merchants is to a large degree a bias against the Chinese, who control an estimated 90% of the business of Thailand. The low prestige level of business has important implications for the future, because much of Thailand's economic development depends on the willingness of people to go into business.

Although the royal family is highly revered, the Thai university students do not rank royalty as occupationally important for the development of their country, and they feel that a person should be respected for his ability and accomplishments, not for his birthright.

⁵⁰Ibid., p. 36.

The educational level of the parents is often a significant factor in the motivation, desire, and ability of a student to obtain a higher education. Thailand seems to be no exception to this pattern. In a country where the vast majority of the population has only four years of formal education or less, the students in the universities come from families whose parent's education is much higher, as is evidenced by the following table:

Table 5.15

Educational Level of Parents of University Students⁵¹

Educational Level	Pratom 4 or less	MS1-3	MS4-5 or Higher	No Answer
Of Father				
Male Students	25.3	20.5	28.2	26.0
Female Students	10.4	25.1	43.9	20.6
Of Mother				
Male Students	53.7	14.6	10.7	21.0
Female Students	41.0	30.4	13.5	15.1

The application form for admittance to the university broke down the occupational groups into only four categories: Proprietors and Self Employed, Government Officials, Agriculturalists and Employees. These are the four categories used with the sample of science students, though it may have been helpful, if the categories could have been broken down further. In the science sample, 233 students were from business families, 74 from the homes of government officials, 14 from employee homes, and 27 from agricultural backgrounds.

⁵¹Ibid., pp. 12-13.

The correlations of parent's occupation with success on the examinations and in the university were generally in favor of those students from the homes of government officials and business proprietors, but the correlations were not significant, except in the case of success on the English examinations, where correlations of .18 and .10, significant at the .05 level were obtained.

Age Factors in Academic Achievement

The largest number of university entrants are age 18, followed by 19, 20, and 21 year olds in that order. The entrants, in general, range from age 15 to 23, with a few older students in areas such as education. As is true in most studies of the relationship of age and achievement, the younger students outperform their older counterparts. This is due in Thailand to the fact that the older students have often had to repeat one or more grades, and are therefore not of as high quality. On the JHEEE, the older students are often those who have failed the examination one or more times, or people who have dropped out of school for a period of years, and are thus not as well prepared for an examination, which is so largely based on the memory ability of the students. The following chart shows that the younger students significantly outperform the older students in gaining admission to the University.

Table 5.16

Age of Candidates for University Entrants

Age	# of Candidates	# of Successful Candidates	Rate of Passing
15	13	10	76%
16	255	141	59%
17	1,952	1,022	52%
18	6,091	2,627	43%
19	5,633	2,063	36%
20	5,112	1,435	28%
21	2,040	466	22%
22	1,205	256	21%
23+	1,579	207	13%

The breakdown by ages of the science sample is as follows:

Table 5.17

Age	Number
16	9
17	56
18	142
19	97
20	46
21	7
22	7
23+	4

The results of the correlational analysis show age to be significantly correlated with scores on the MS5 examination, with a negative correlation meaning that the younger students did better on the examination.

Table 5.18

Correlation of Age with MS5 Examination Scores

Examination	N=299 Correlation	Level of Significance
Thai	-.12	.03
English	-.06	.22
Social Science	-.10	.06
Physics	-.16	.01
Biology	-.14	.01
Chemistry	-.16	.01
Mathematics	-.15	.01
Total	-.05	.34

The direction of the correlations on the JHEEE was in favor of the younger student, but the correlations were too low to be of any significance. In their first year at the university, the younger students outperformed the older students in all subjects in all faculties, with the one exception of Physics in the Chulalongkorn Evening Science Faculty. This is seen on the following page in Table 5.19.

Buddhism and Education

The importance of Buddhism in Thai society has been alluded to in the discussion of the patterning of sex

Table 5.19
Correlation of Age with University Grades

University	Subject				
	Chemistry	Biology	Physics	Mathematics	English Total
Chulalongkorn Day	-.20**	-.20**	-.08	-.14	-.18* -.21**
Chulalongkorn Evening	-.15	-.17**	.10	-.07	-.12* -.10
Kasettsart	-.18	-.28	-.20	-.06	-.15 -.27*
Chiangmai	-.20*	-.08	-.18	-.23**	-.16 -.23**

* = .05 level of significance

** = .01 level of significance

roles. All aspects of Thai life are conditioned by the general social value system of Buddhism. In the economic realm, it has an important effect on the economic behavior of the Thai people, in addition to such economic effects as the drain of alms, the maintaining of a large monkhood, and the construction of thousands of temples.

The loose structure of the society and of the family is partially a result of the principal tenet of Buddhism which is the:

...complete psychological freedom, isolation and responsibility of every person...every person is a free agent, responsible only to and for himself, and he inevitably reaps the fruits of his own conduct.⁵²

The individual must actively pursue meritorious action. He can never "rest on his own laurels," as every act is potentially merit-making or losing. The goal of Buddhism may be characterized as "other-worldly," as the rewards may not come in this life.

Buddhism has an important effect on the social organization of Thailand. The monk stands at the pinnacle, followed by the King and government officials, with the mass of the peasantry standing at the bottom of the merit and the social hierarchy. Though the amassing of "worldly" wealth is not a significant motivation for action for the Buddhist, one can gain merit through the expenditure of that worldly wealth in performing meritorious acts appropriate to one's status.

⁵²Phillips, op. cit., p. 88

The Thai social structure is fluid and one can move to high social status quite easily and also be degraded to the lowest levels with great suddenness. An individual's social position can be raised or lowered by the King, and the Chinese are an example of the sudden rise and assimilation into the Thai upper class. The categories of monk, official and commoner are hierarchically ranked and mutually exclusive, but movement between categories was and is still frequent. Virtually no position is cut off from achievement.⁵³

In a changing and rapidly modernizing society such as Thailand's, the role of religion in the lives of its people is forced to change. Attendance at wats has fallen off in recent years, with many only bringing offerings on special Buddhist holidays. Whereas in past years, almost all men served a period of time (usually 3-6 months) as a monk, a large percentage of the modern Thai men never enter the priesthood. The demands of life, working hours, education, movies, and other facets of modern existence all cut down on religious belief and activity. Mosel points to the three areas of Thai culture as:

...rice cultivation, government and the Buddhist religion. The first is the primary preoccupation of the rural peasantry, the second of the urban upper classes, and the third the concern of both groups.⁵⁴

⁵³Kirsch, op. cit., pp. 7-11.

⁵⁴Mosel, op. cit., p. 300.

Many only stay with Buddhism because it is the national religion, and it would be akin to disloyalty to give it up. There are also close ties of Buddhism with nationalism and individual family relationships. Buddhism, though still outwardly prosperous, seems to be losing out and is not being replaced by any other form of religion or code of ethical and moral values. Many Thais feel that Buddhism' traditional concepts and practices are outmoded and conflict with the education, science, materialism and entertainment of modern Thai life. There is also the feeling that Buddhism is losing out because most of its priests are holding themselves aloof from modern life. Graham concluded:

Thailand's young are living in a moral and ethical vacuum deprived of the underpinnings which give substance and value to life and stability to marriage and family living.⁵⁵

One cannot understand any aspect of Thai life without an understanding of the role of Buddhism past and present. The Thai educational system has been closely linked to Buddhism throughout most of its history, so one cannot ignore the impact of religion on the schools. The monasteries played an important educational role by implanting respect for teachers on the part of their pupils. A student was expected to honor and respect his teacher throughout life, and this has helped to give a great deal of prestige to the teaching profession. The Lord Buddha taught that it was better to be a scholar than a king, and many Buddhist

⁵⁵Graham, op. cit., p. 17.

proverbs seek to emphasize the importance of wisdom and knowledge. The temples still hold classes on two levels. For those with the prerequisite training, classes on theory and philosophy are held, while for the masses, sessions dealing with the practical aspects of Buddhism and how to meditate are conducted.

Religion was not included as one of the background factors in this study, because of the difficulty of doing any valid comparison in a state so heavily Buddhist. Statistics for 1965 show the religious make-up of Thailand to be 94.1% Buddhist, 3.9% Muslim, .5% Christian, and 1.5% Animist. There can be no doubt however, of the important impact of religion on the attitudes of the Thai people towards education.

Private Education and Academic Achievement

Very little, if any, research has been conducted in Thailand on the private schools. A great deal needs to be done, however, in the light of the role the private schools play in the total educational program. The private schools are concentrated in Bangkok and Thonburi, where they account for 50% of the total enrollment, and 32% of the total private school enrollment in the Kingdom. The statistics on Table 5.20 point to the growing importance of these schools.

Table 5.20

Number of Private Schools in Thailand⁵⁶

Type of School	1958	1962
Kindergarten	163	225
Elementary	906	1087
Lower-Mathayom	660	810
Upper-Mathayom	44	117
Vocational	254	350
Special Education	462	512
Total	2489	3101

Not only are there a large number of private schools, but the % enrollments point to their great impact. These figures were based on 1956-1964.

Table 5.21

Percentage of Students Enrolled
in Private Schools⁵⁷

Pratom 1 = 10.90%	MS 1 = 50.07%
Pratom 2 = 7.04%	MS 2 = 50.23%
Pratom 3 = 7.26%	MS 3 = 50.00%
Pratom 4 = 7.66%	MS 4 = 53.93%
Pratom 5 = 48.32%	MS 5 = 49.29%
Pratom 6 = 48.92%	
Pratom 7 = 49.79%	

⁵⁶ Thailand Official Yearbook: 1964 (Bangkok: Government Printing Office, 1964), p. 44.

⁵⁷ Educational Planning Office, Secondary Education Study, op. cit., p. 63.

The Ministry of Education accredits those private schools which meet the standards of the government in such things as buildings, equipment, certified teachers and curriculum. In 1963, 485 of the 2014 or 24% private elementary and secondary schools had government accreditation. The government grants a subsidy to private schools meeting certain criteria. Most of this assistance is in the form of money for the hiring of properly qualified teachers. Not all private schools may receive these subsidies, as they are limited to those run by official bodies, organizations, foundations and monasteries, so that schools run for profit by private individuals are ineligible. Those using other than the prescribed curricula or charging excessive fees are also ineligible for government aid.

The kindergartens of Thailand are almost completely run by private individuals and organizations, and the government kindergartens are used only as models. As the government enforces its compulsory education law through Pratom 7 (grade 7), the percentage of students in private schools will no doubt drop at the upper elementary level. Private vocational schools are of the short-course type for the most part, offering training in special skills. Most private secondary schools are of the academic variety, because of the high costs of running a vocational school.

Until comparatively recent times, many of the private schools, particularly those run by foreign mission societies, were able to attract the best students. With the rapid

expansion of government expenditures for education and the rising quality of the public schools, most of the better students prefer to attend the large public schools in Bangkok. A comparison of the success of students in passing the MS5 examination, and on obtaining admission to the university is some indication of the quality of student and the quality of instruction received in the private secondary schools.

Table 5.22

Passing Rate on JHEEE of Students from
Public and Private Secondary Schools

Type of School	No. of Candidates	No. of Successful Candidates	Rate of Passing
Central-Bangkok			
Public	5,188	2,931	56.47
Private	7,601	2,320	30.52
Cut of Bangkok			
Public	3,328	1,168	35.09
Private	1,234	418	33.87

The Government of Thailand is considering ~~the~~ passing of an act allowing the establishment of private colleges. All higher education at the present time is under public control, but with the rapid increase in qualified students for university admission, it has been felt that high quality private colleges should be permitted to operate in the near future. These colleges would have to meet standards of accreditation as laid down by the National Education Council, in such areas as capital expenditures,

academic programs, housing facilities, staff qualifications, and admissions policies.⁵⁸

In the sample of science students, 190 were from private secondary schools and 178 from public secondary schools. The success of the public school students is seen in the correlations of MS5 examination scores with the type of school attended. The positive correlations indicate greater success by public school students.

Table 5.23

Correlations of MS5 Examination Scores
and Type of Secondary Schools
N = 299

Examination	Correlation	Level of Significance
Thai	.18	.01
English	.07	.17
Social Science	.45	.01
Physics	.54	.01
Biology	.49	.01
Chemistry	.49	.01
Mathematics	.19	.01

The percentages of students from public and private schools passing the MS5 examinations indicates the higher level of achievement attained by students in the public schools.

⁵⁸ National Education Council, "Private Colleges," (Bangkok: 1968), p. 11.

Table 5.24

Passing Rates on MS5 Examination

Type of School	Science	Arts	Total
Public	78.99%	74.93%	76.51%
Private	54.93%	45.65%	49.65%

In the sample used in this study, however, the students from private schools outperformed those from the public schools on the JHEEE. Only in English, Biology and the Total score were the results significant. Negative correlations indicate that private school students performed at a higher level than those from public schools.

Table 5.25

Correlations of JHEEE Scores
and Type of School
N = 368

Examination Subject	Correlation	Level of Significance
English	-.22	.01
Mathematics	-.01	.78
Biology	-.18	.01
Chemistry	-.02	.61
Physics	.06	.23
Total	-.26	.01

The highest correlations between private school students and the scores on the JHEEE were in English and Biology, the lowest being in Physics, where the students from public schools did better.

In the university, there was no significant difference in achievement between the students from public and private

secondary schools. In three of the four faculties, the direction of the correlations was in favor of the students from the public schools. Only at the Chulalongkorn Evening Science Faculty was the direction of the correlations in favor of the private school student. The only significant correlations in university achievement were in English, where once again, students from the private schools outperformed those from the public schools.

Coaching Schools and Academic Achievement

The coaching schools began approximately fifteen years ago to prepare students for the entrance examinations administered by the Thai Universities. With the tremendous expansion of the secondary schools in the past ten years and large numbers of candidates competing for a limited number of spaces in the universities, the coaching schools have expanded rapidly. No accurate statistics are available, due to the lack of supervision of these schools by any governmental agency. All schools must register with the Department of Secondary Education of the Ministry of Education, but no statistics are filed and there is little control over curriculum, textbooks, or teachers.

There are about ten coaching schools, all located in Bangkok, due to the vast majority of secondary school students being enrolled in the capital city. Three of the four types are evening schools. The first type, and the smallest are held from July to March, for those students who fail the entrance examination and desire to study for

a full year in preparation for the next examination. The second type is a one semester course lasting from October to March, and is attended by a large number of students currently enrolled in MS5. The third type is the largest, and is annually attended by several thousand students. This type is held from the middle of March, following the MS5 examination, until the middle of April. The fourth type is the only coaching school conducted in the daytime, and is held without official approval of the Ministry of Education.

Classes are generally held from 4:30-8:00 P.M., six nights a week. The schools are divided into science and arts just as the regular schools, and students study those subjects over which they will be tested on the JHEEE. The lecture method is used in all subjects, and students use regular secondary texts, in addition to which they learn to answer questions by going over old examinations for practice. A claim has been made that 20% of the examination questions are repeated each year, but this has never been substantiated.

Tuition varies according to the length of the course and the prestige of the school. For the year course, tuition ranges from 720 to 1200 Baht (\$36 to \$60), 360 to 600 Baht (\$18 to \$30) for the one semester course, and 180 to 300 Baht (\$9 to \$15) for the month long course. This is a considerable amount of money, particularly in

view of the fact that a vast number of those in the March-April course are from poor rural homes, whose average yearly income may not be over \$100. These students come because they feel that the generally inferior secondary schools in the provinces did not prepare them well enough for the JHEEE.

The schools will generally post signs outside the buildings in which they are being conducted. These are usually private schools which are rented for the evenings. Most also advertise in the paper, using the names of their professors as a main attraction along with the success they have had with their students in the past.

Almost all of the teachers in the coaching schools are full-time teachers during the day. The better paying schools hire university professors, and one claims to have three Ph.D's on its teaching staff in the sciences. Other schools which charge less tuition can only afford secondary teachers, many of whom end up teaching the same lessons they have taught during the day to many of the same students. The motive for teaching in the coaching schools is financial. There are no prestige or other factors involved. The average university professor makes around 4000 Baht (\$200) a month, which in Bangkok today does not last very long. He can often earn as much as 2000 Baht or more a month in the coaching school which is a big help in making ends meet. Some have been known to equal or

surpass their regular salary.⁵⁹ It is known that in the one month coaching school, the director can make over 60,000 Baht for himself after expenses are paid. It is thus obvious that the coaching schools are a big business, and a very profitable one for many Thai educators today.

The coaching schools are based on the fear that the students have about failing the university entrance examination. Most University and Government Officials feel they do more psychological good than actual good for the student, but no one is willing to close them down. The major question which most raised about their existence was that they give a false impression as to what real education is. Students already have the feeling that "education" is just preparing for and passing examinations, and the coaching schools seem to add to this outlook. There can be no doubt that those students who have had poor training or no training in a particular subject area are aided by the schools, but for the most it is a review of what they have learned in their regular secondary schools. The coaching schools also tend to make the student concentrate less on his secondary studies, and put more time into his work at the coaching school, which is often taught by a more prestigious teacher. This tends to undermine the morale and purpose of the secondary school.

If the MS5 examination were used for admittance to

⁵⁹Dr. Sawan, Interview held in Bangkok, March, 1968.

the university it would cut down on the role of the coaching school, because no longer would students be able to congregate in Bangkok for a month prior to the JHEEE, but could remain at their own secondary schools. Some of the coaching schools have advertised the names of well-known professors as being on their staff, while these individuals may never teach, but just sell the use of their name. Others have advertised false success stories of their students or the earning of false degrees by some of their teachers. In general, however, the schools are honest, but must be looked on as a profitable business enterprise rather than as an educational institution.

Statistics comparing the passing rates of students who attended coaching schools and those who did not are not available, but it is known that in 1967, 44% of the successful candidates for university admission attended one of these schools. A higher percentage of women than men attended; 49% as compared to 40%. Those attending the coaching schools were concentrated in the science faculties, with pre-medical students leading the way with 67% of their students in attendance.

In the sample of science students, 225 or 63% of the total group attended a coaching school. The results of the study were not significant and on almost half of the examinations, students who did not attend a coaching school outperformed those who did. Correlations ranged from $-.09$ to $.05$.

Choice of Faculty and Academic Achievement

It has been hypothesized by some Thai education officials, that students who were admitted to the faculty which was their first choice would perform at a higher level than those for whom it was a fifth or sixth choice. The breakdown of choices for the total sample were as follows: first choice 32, second choice 85, third choice 73, fourth choice 106, fifth choice 58, and sixth choice 14.

The results of a correlation of academic achievement with a choice of faculty varied with each institution. In the Chulalongkorn Day Science Faculty, the achievement of those who had made it, their 1st or 2nd choice was significantly better in Chemistry, Physics, and Total Scores. The correlations in the Evening Science Faculty were in the opposite direction, with students making a fourth, fifth or sixth choice, performing at a higher level. The English score was the only significant score, however. The results at Kasetart were mixed, but generally in favor of those who made it a lower choice. Only the Biology score was significant at the .05 level. At Chiangmai the results were also mixed, but slightly in favor of those making the faculty a higher choice, although once again, only the Biology score was significant at the .05 level. Table 5.26, on the following page, shows the choice of faculty and academic achievement.

Table 5.26

Choice of Faculty and Academic Achievement

University	N	Correlation	Level of Significance
Chulalongkorn Day	137	-.19	.02
Chulalongkorn Evening	79	.13	.23
Kasetsart	49	.17	.21
Chiangmai	103	-.07	.45

Science Education and Academic Achievement

The country of Thailand has recognized the need for trained scientists, and in recent years many programs have been started to produce a larger number of university graduates in the scientific fields. In the early days of university education, students chose law as the faculty which they would most like to enter, and the government had to set up special scholarships and incentives to attract students into the sciences. In recent years, however, medicine and engineering have become the most popular, and whereas tuition for other faculties ranges from 300 Baht (\$15) to 800 Baht (\$40) per year, the tuition for engineering is 5000 Baht (\$250) and for medicine 10,000 Baht (\$500). This has in no way prevented a vast majority of science students from choosing these two fields, as a student can receive a government scholarship, if he promises to work for the government after his graduation.

The past five years have seen an emphasis upon the natural sciences, with a new program being proposed at the

University of Medical Sciences in conjunction with the Rockefeller Foundation, to produce a sizeable number of candidates, who would then go to the United States for their graduate work. A second significant program is that being proposed by the University Development Commission, whereby selected departments at each of the Thai universities would develop master's and eventually doctoral programs in the natural sciences. Just as there was a need for expansion in medicine and engineering fifteen to twenty years ago, the greatest need today is for a rapid expansion in the natural sciences. The number of students in the natural sciences is still quite small, only 427 of a total of 8231 entrants to the universities in 1967. Of this number, only 44 chose natural science as a field they would most like to study, the rest hoping to gain admission to engineering, medicine, pharmacy or dentistry. Table 5.27 indicates the preference of fields, faculties and universities by those students who took the JHEEE science examinations.

Perhaps the major obstacle to the development of science in the universities is the low quality of instruction in the secondary schools. This is due to many factors, not the least of which are the low level of training of most secondary science teachers and the lack of equipment with which to properly teach scientific subjects. Another factor in the low standard of science teaching is the fact that 2/3 of the students in MS4 and

Table 5.27
Ranking by Faculty of Science Students - JHEEE Scores

Faculty	# of Students	High Score	Low Score	Mode	Median	Mean
M.S.-Pre.Med.	200	411	302	329	327	333
Chula.Pre.Med.	153	397	276	290	289	291
Ch.-Pre.Med.	62	343	269	269	283	287
M.S.-Pharm.	121	318	257			
Chula.Sc.-Day	154	363	246	251	254	267
Ch.-Pharm.	30	313	238			
M.S.-Dent.	81	297	233			
M.S.-Med.Tech.	70	264	214			
Ch.-Dent.	15	242	214			
Chula.Sc.Eve.	100	271	201	221	221	222
Chula.-Ed.Sc.	102	291	200			
M.S.-Nursing	21	242	196			
Ch.-Sc.	122	268	187	187	210	211
Kas.-Forest.	131	293	186	190	203	207
Kas.-Sc.	54	235	189	185	202	204
M.S.-Physiol.	20	253	181			
Kas.-Ag.	359	259	179			
Ch.-Med.Tech.	29	244	171			
M.S.-Publ.Health	61	249	170			
Kas.-Fisheries	45	249	166			
Kas.-Vet.Sc.	71	261	165			
Ch.-Nursing	40	209	159			
Chula.-Ed.Sc.Eve.	30	198	159			
Ch.-Geol.	30	227	156			
Ch.-Ag.	90	210	151			
Kas.-Ag.Econ.	54	235	150			
KhonKaen-Ag.	100	230	144			
Chula.-Prac.Chem.	21	179	125			
Ch.-Nurs.Dipl.	70	170	124	133	137	141

Rankings based on bottom cut-off score.

M.S. = Medical Sciences

Chula.=Chulalongkorn

Ch. = Chiangmai

Kas. = Kasetsart

K.K. = KhonKaen

MS5 are in the science area with its poor facilities and lack of teachers, while the arts, with adequate facilities and teachers, only attracts 1/3 of the students. Students in the provinces have a smaller chance of passing the MS5 and the university entrance examination, due to the fact

that such things as laboratories and even good textbooks are unknown in some rural secondary schools. A student from one of these schools must memorize everything from teacher's lectures, and consequently, when he is faced with questions of the nationwide examinations, which deal with experiments or even book diagrams, he is at an extreme disadvantage.

Most of the instruction in science at all levels is geared to the passing of an examination. Teachers lecture and the students are expected to take notes and memorize them, and seldom do the teachers make any attempt to use the discovery or inquiry approach to teaching. Often the syllabi used provide little or no help to the teacher, giving only the main topics to be covered. At the elementary level, books, teaching aids and laboratory equipment are almost non-existent, and at the secondary level only the larger schools have them in sufficient quantity. The examinations used in science are designed to test the ability to recall, with few if any questions testing a student's ability to apply, compare, find causality, analyze or synthesize.

At the secondary level, students may choose four out of five science courses from among three physics classes, one biology class and one chemistry class. This often leaves a student with important gaps in his understanding of science. There is also a good deal of overlap between the elementary and secondary, and secondary and university

courses, so that some important content is left out at the expense of repetition. Perhaps the major barrier at the present time is the lack of good textbooks in Thai. Translations of BSCS and PSSC books are now being done, which should improve the situation, but efforts will still have to be made to adapt them for use in Thailand.⁶⁰

In addition to the translations of textbooks, other efforts are being made to improve science teaching in the secondary schools. Curriculum committees have been appointed to evaluate and bring the curricula up-to-date, and in-service training programs are to be started to upgrade teachers' qualifications. The possible use of television teaching has been considered, and plans are being laid to provide more laboratory and audio-visual materials for use in science classrooms.

Science teaching at the university level suffers from most of the same problems that confront Thai secondary schools. The problem of qualified teachers at an advanced level is perhaps more acute than the problem of staffing in the secondary schools, due to the preference of Thai students for medicine and engineering degrees, and the desire of many qualified people to work at more lucrative jobs, rather than teach at the universities for \$200 to

⁶⁰For further information see Final Report of a SEAMES Sponsored Seminar on Science and Mathematics in Thailand: August 7-9, 1967. (Bangkok, Thailand: Ministry of Education, 1967).

\$400 a month. At the university, the understanding of English becomes extremely important, as many of the basic texts and almost all the supplementary texts are in English. At the advanced levels in most of the universities, one can find foreigners teaching in English, so the science student must not only be able to read English, but also to understand the spoken language. Evidence of the difficulty students have is the low grades many receive from English-speaking instructors, as compared to grades received from Thai instructors.

A recent grant from the United States Government, which was matched by the Thai Government, is providing \$200,000 worth of science books, which should aid in building up the research libraries, which are entirely inadequate at the present time. Faculty have little time or money for research, but evidence of a change in this is the 1968 budget proposed for Chulalongkorn University, which for the first time has set apart a sizeable sum for faculty research. A major effort will need to be exerted in the coming years to make science an attractive field, so that more of the best students will choose to major in it, rather than going into medicine and engineering.⁶¹

⁶¹For further details see Frank G. Nicholls, A Program for the Development of Scientific Research in Thailand (Bangkok: U.N. Program of Technical Assistance, 1961).

The scores on the MS5 examination are usually much higher than those on the JHEEE. Students are required to get 600 points out of a possible 1000, and in 1967, approximately 66% of all the students attempting the science examination passed it. The details of the MS5 examination were dealt with in Chapter III, so only the results of the examination will be looked at here. Table 5.28 indicates the mean scores obtained by the four sample groups on the MS5 examination. In most cases, students scored higher on the MS5 examination than they did on the JHEEE or in their first year at the university. Based on their scores on the examination, students performed at the highest level in Mathematics followed by Physics and Biology, with performance being the lowest in Chemistry.

The scores on the JHEEE would seem to indicate that it is a more difficult examination. No arbitrary passing level is set, and students are admitted to the university faculties on the basis of their total scores and their choice of faculties. On the JHEEE, it is Physics which gives students the most difficulty, with Mathematics' scores being almost as low. Students do best in Biology followed by Chemistry. Table 5.29 gives an indication of the performance levels of students on each of the examinations. With 60 set as the point of passing in the university, it is interesting to note that in only one faculty (Chulalongkorn), and in only one subject (Biology), did the students perform at this level. Only the Pre-

Table 5.28
Mean Scores in the Sciences on the MS5 Examination

University	Physics ¹	Biology ²	Chemistry ³	Mathematics ⁴
Chulalongkorn Day	118.10	53.73	48.39	219.02
Chulalongkorn Evening	109.24	48.59	44.41	205.32
Kasetsart	106.05	47.33	42.48	208.59
Chiangmai	107.29	49.89	44.41	207.95
Total	114.57	53.03	47.44	212.61

¹Based on a possible 140 points.

²Based on a possible 70 points.

³Based on a possible 70 points.

⁴Based on a possible 240 points.

Table 5.29

Mean Scores in the Sciences on the JHEEE

University	Mathematics	Biology	Chemistry	Physics
Chulalongkorn Day	45.03	61.16	50.36	43.24
Chulalongkorn Evening	36.15	54.13	45.73	35.58
Kasetsart	35.40	52.08	38.67	30.22
Chiangmai	35.19	54.18	41.14	32.91
Total	39.04	56.18	45.29	37.03

All scores based on a possible 100 points for each examination

Medical students at the University of Medical Sciences achieved an average of 60 on all five entrance examinations.

Achievement in the sciences at the university during the first year is generally at a fairly low level. Due to the different grading procedures, no attempt was made to average the scores of the four faculties. In three of the four faculties, students did best in Biology, with means in the other three subjects either below the 60 passing level or just barely above it. Table 5.30 gives a breakdown of the means by faculty, in addition to the study of the 1967 university entrants.

An analysis of the 1966 entering class was made in three of the universities of Thailand, to find the areas of greatest difficulty in the sciences. This analysis was made to see what happened to the students who failed a course the first time. After the first year, students in the Chulalongkorn Day and Evening Science Faculties are joined^{ed} together, so that the statistics presented here deal with both groups of students. Students who receive a score below 60 must repeat the course, and any student who fails two or three classes must repeat not only those he failed, but also those in which he received a grade of less than 70. Due to the large clustering of students in the low 60's in all subjects it is not uncommon for a large number of students to have to retake a class even though they passed it the first time. The following wastage rates are based on the total of those who failed

Table 5.30
Mean Grades in the Sciences for First Year of Work in the University

University	Chemistry	Biology	Physics	Mathematics
Chulalongkorn Day*	62.16	66.84	59.70	62.22
Chulalongkorn Evening*	56.46	63.42	58.04	52.18
Kasetsart*	59.22	67.31	62.86	66.28
Chiangmai**	3.11	2.95	2.75	2.75

*Grades are based on 100 points - 60 is passing.

**Grades are based on a 5 point scale - 2.00 is passing.

the course the first time and those who passed it, but were made to repeat it because their grade was less than 70.

Table 5.31

Wastage Rates in Science Faculty:
Chulalongkorn 1966-67

Subject	Wastage Rate
Biology	42.30%
Chemistry	47.00%
Physics	40.60%
Mathematics	60.70%

Using the above table as an indicator of the problem areas, mathematics is seen as the area of greatest difficulty. Students who fail only one subject may petition to be reexamined. Students who fail four or five courses are asked to withdraw from the university, though there is nothing to prevent them from retaking the JHEEE and entering the same faculty again. A large number of students received a score of exactly 60 in one or more subjects. Almost 50% of the chemistry grades were 60, with a large number of 60's in the other subjects also. This score is often indicative of the fact that the student's grade was raised by faculty action, to prevent too large a number of students from failing. With this fact in mind, it is quite possible that an even larger percentage of students may have failed.

At Kasetsart University the failure rates were not nearly as large, though there were a large number of

1

students receiving a 60 in Chemistry. Physics was the area of greatest difficulty for the first year students at Kasetsart University in 1966. Khon Kaen University does not have a science faculty, but an analysis of student achievement in the sciences, mathematics, and English among their engineering students indicates many of the same problems as are found at Kasetsart and Chulalongkorn Universities.

Table 5.32

Failure Rates at Khon Kaen
University: 1966

Subject	Failure Rate
Physics	89%
Chemistry	10%
Calculus	53%
Analytic Geometry	11%

Studies at Chiangmai University indicate that the lowest achievement is in Physics and Mathematics, with generally higher levels in Chemistry and Biology. A study of fourth year students in the Faculty of Science at Chulalongkorn University indicated that 44% of them had been made to repeat at least one full year of work at the university.

English Ability and Academic Achievement

The ability to read the English language is of extreme importance for the student entering the Thai universities. A majority of the textbooks used are in English, and most

students will have had several farang (foreign) professors before finishing their bachelor's degree. English is generally taught, starting in the fifth grade, so that a university student will have had eight years prior to his arrival at the university. The major problem is the poor level of elementary and secondary instruction in English. This has been improved in recent years with several hundred Peace Corps teachers, but for the most part, the elementary and secondary school teachers of English know little more than their students. The results of such poor training often do more harm than good, and teach bad habits which are hard to change.

...The Siamese first year man knows what a gerundal infinitive is and he knows what the Present Imperfect Monetary Tense of the Infinitive Mood is....However, the average Thai student is talented. He can completely segregate grammar from the English language. To him it is a separate subject like English.⁶²

Though perhaps overstated, the above quotation summarizes the mood and attitude of many professors of English in Thailand. In October, 1967, a survey was taken and tests administered by a committee of the University Development Commission. The report of the survey committee is one of the more complete, and the most recent evidence of the state of English language teaching in Thailand. Some of the problem areas listed by the

⁶²Carol Hollinger, Mai Pen Rai means Never Mind (Boston: Houghton Mifflin Company, 1965), p. 111.

committee are as follows:

1. Many of the English teachers lack a knowledge of their subject and the techniques of how to teach it.
2. There is too much duplication of effort by different departments and faculties each teaching their own English courses.
3. There are too few teachers, too few classrooms and the classes are too large.
4. There is a lack of integrated and graded materials.
5. Library facilities and training in their use are inadequate.
6. The role of English in the curriculum has never been clearly defined.⁶³

Many recommendations were made by the committee including the establishment of an English Language Center to train graduate students going abroad for study and English teachers for Thai Universities. Other recommendations included the consolidation of English teaching into one department, the use of full-time instructors and smaller classes. An interesting recommendation which goes against Thai traditional grading procedures was the counting of class work as a considerable portion of the grade rather than just a final examination. At the pre-university level, the committee felt that only teachers with a good command of the language should be allowed to teach.⁶⁴

The English Proficiency Test given to foreign students in the United States before they begin a graduate program

⁶³English Language Program Committee, English Language Teaching in the Universities of Thailand (Bangkok: University Development Commission, 1968), pp. 4-6.

⁶⁴Ibid., pp. 7-30.

was administered to 479 students in English, Economics, Physics, Chemistry, Biology, and Mathematics. Of the non-English majors tested, 127 of whom were graduate students and 196 of whom were fourth year students, only 9% received a score of 75 or better, the score needed to begin a graduate program in the United States. Of the English majors, only 19.9% received a score high enough to begin a graduate program in an English speaking country.⁶⁵

The English scores on the MS5 Examination, the JHEEE, and the first year at the university are not indicative of the low level of English ability, which these outside tests seem to show. The mean English scores on the MS5 Examination are higher than most of the scores on the other tests.

Table 5.33

Mean Scores on the MS5
English Test

University	N	Mean
Chulalongkorn Day	120	117.36
Chulalongkorn Evening	59	100.59
Kasetsart	39	100.00
Chiengmai	81	107.31
Total	299	109.34

With the exception of Biology, students generally perform at a higher level on the JHEEE in English than in the sciences as is seen in Table 5.34.

⁶⁵Ibid., pp. 3-4.

Table 5.34

Means on the JHEEE English Test

University	N	Mean
Chulalongkorn Day	137	58.51
Chulalongkorn Evening	103	49.53
Kasetsart	49	49.06
Chiengmai	79	50.10
Total	368	52.65

As was true on the Entrance Examination, students perform at or near the highest levels in English at the universities when their scores are compared to those in Chemistry, Mathematics and Physics, though one often finds Biology grades as the highest.

Table 5.35

Mean Scores in English at the
at the Universities

University	N	Mean
Chulalongkorn Day	137	66.21
Chulalongkorn Evening	79	60.22
Kasetsart	49	69.55
Chiengmai	103	3.17*

* = based on a 5 point scale rather than 100.

In an analysis of the 1966 entrants to the universities, it was found that English was the subject failed the least in each of the universities. In fact, in two universities no students failed the subject. A great deal depends on

the instructor, as the statistics on two separate years at one university indicate. In 1965, 40% of all students failed English and a mean score of 63% was attained. In 1966, at the same school, 100% of the students passed English, and the mean score was 79.97. Evidence such as this gives some indication of the wide range of teaching and also what is expected of students at each of the universities.

The Prediction of Academic Performance

One of the major purposes of the study was to test the validity of the MS5 examination and the JHEEE as predictors of success in the universities of Thailand. The decision was made to limit the study to one curricular grouping, so as to make sure the sample was made up of students, who not only took the same MS5 test and JHEEE test, but also would be taking the same courses in the university. The science faculties at Chulalongkorn, Kasetsart and Chiangmai Universities met these basic criteria. There was also the added advantage in that most students in each faculty had the same instructors, thus cutting down on the variability of grading procedures and tests used in evaluation. Similar research in Thailand has attempted to study the determinants of performance across curricular groupings, thereby losing much of its predictive power and validity.

The present study does not attempt to answer questions concerning the reliability of the tests as this would be

a complete project in itself. Problems of standardization, the use of essay questions, inadequate grading procedures and other factors, however, raise important questions concerning the reliability of the MS5 examination and the JHEEE. Examples of questions from the JHEEE are listed in the appendix.

Zero-order correlations were obtained for all tests in each of the faculties, and multiple correlations were used to identify the best possible combination of tests which could be used in the prediction of grades in each subject. The tables listing the results of these correlations are found in the appendix.

With five subject scores and a total score to be predicted for each faculty, there were a total twenty-four predictions to be made. Using the zero-order correlations, a test or total score on the MS5 examination accounted for nineteen of the twenty-four highest correlations. In only five cases did the JHEEE, which is used to admit students to the universities, prove to be the best predictor of success, and of those five cases, only the biology test in two faculties and the English test in one faculty proved to be the best predictors of success in that particular field.

The tests which proved to be the best predictors, regardless of the subject field were the MS5 English and the JHEEE English tests, the former proving to be the slightly better predictor. The MS5 mathematics score was

the most valid predictor of success in both mathematics and physics in all of the faculties, while both biology examinations proved to have some validity for prediction of success in biology in the university. Surprisingly, some of the highest correlations in each subject field in the Evening-Science Faculty at Chulalongkorn University were obtained from the MS5 social science test. The tests proving to have the least predictive ability were the JHEEE mathematics, chemistry, and physics, which together account for 60% of the score used for university admission at the present time. If a total score is to be used for admission to the university, the MS5 examination is a significantly better predictor than the JHEEE.

The multiple correlations providing the best prediction of success in each subject at each faculty are presented in the appendix. There is little similarity between the tests used to predict success in each of the faculties, but the same tests which provided significant zero-order correlations also played a significant role in the multiple correlations. These examinations were the two English tests, two biology tests, and the MS5 mathematics and social science tests. The total scores on the MS5 examination and the JHEEE were not included in the multiple correlations due to the fact that they are summarizing variables, and therefore could not be used in the computer.

Significant correlations were obtained at the .01 level in most subject fields, though chemistry proved to

be the most difficult to predict. The highest correlations were obtained at Chiangmai, the improbably high correlation of .98 being obtained between five MS5 tests and total grades attained. The lowest correlations were in the Day Science Faculty at Chulalongkorn University. Table 5.36 presents a comparison of the present system using the JHEEE total score with the best prediction if a multiple correlation was used.

Attempts were made to use the biodata information in the multiple correlation, to aid in the prediction of success in the university, but with few exceptions the biodata contribution proved to be insignificant. It was also felt that better judgements on the validity of the MS5 examination and the JHEEE could be made, if the biodata was not included among the variables in the multiple correlations.

Table 5.36

The Prediction of Academic Success Comparing the Total
JHEEE Score and Best Combination of Tests

University and Subject	Correlation with Total JHEEE Score	Level of Significance	Correlation with Best Combination of Tests	Level of Significance
Chulalongkorn Day				
Chemistry	.07	.36	.28	.04
Biology	.08	.34	.49	.0005
Physics	.33	.0005	.45	.0005
Mathematics	.07	.40	.34	.002
English	.13	.11	.64	.0005
<u>Total</u>	.18	.02	.45	.0005
Chulalongkorn Evening				
Chemistry	.06	.57	.48	.006
Biology	-.10	.36	.67	.0005
Physics	.13	.24	.66	.0005
Mathematics	.00	.95	.67	.0005
English	-.02	.83	.79	.0005
<u>Total</u>	.01	.88	.66	.0005

Table 5.36 (continued)

University and Subject	Correlation with Total JHEEE Score	Level of Significance	Correlations with Best Combination of Tests	Level of Significance
Kasetsart				
Chemistry	.25	.08	.56	.023
Biology	.25	.08	.52	.138
Physics	.20	.16	.64	.0005
Mathematics	.21	.13	.57	.019
English	.12	.39	.85	.0005
<u>Total</u>	.32	.02	.71	.001
Chiangmai				
Chemistry	.15	.11	.53	.0005
Biology	.02	.81	.68	.0005
Physics	.16	.09	.58	.0005
Mathematics	.16	.10	.51	.0005
English	.08	.37	.90	.0005
<u>Total</u>	.17	.07	.98	.0005

Chapter 6: Summary and Conclusions

Summary

Six purposes or goals set forth for the study in addition to the general purpose, which was to analyze the overall admission's policy for the Thai universities in light of their educational goals. The specific purposes were: 1. To analyze the admissions' procedures of the National Education Council and the universities. 2. To test the validity of the MS5 Examination and the JHEEE as predictors of academic success in the universities. 3. To identify the areas of greatest failure in the science faculties and some of the causes. 4. To analyze socio-economic factors in a student's background which contribute to academic success or failure. 5. To analyze the role of the coaching schools in the admission's process. 6. To recommend changes in the current admissions' procedures and policy.

A review of all related literature in the United States was impossible, due to the fact that many hundreds of studies on the prediction of academic success have been conducted. For this reason, only summarizing works were reviewed, to gain an understanding of methodology and results. Attempts were made to find copies of all relevant research which had been done in Thailand, and where no manuscripts existed, interviews with the researchers were conducted. The related literature in Thailand was found to be quite limited, due to the comparative recency of

educational research in that country. Two predictive studies have been completed in the past and one more is in progress at the present time. Research in the area of student background was also found to be quite limited, while literature on admissions' policies and procedures was almost nonexistent. The studies which have been completed indicated that the present examinations lack predictive ability, and the studies of student background indicate a strong bias towards males, those from the cities, and those from governmental homes.

The background for the statistical study is set in Chapter 3, with a brief educational history of Thailand, a history of higher education and description of each of the universities, a history and description of the National Education Council, and an analysis of the present state of testing in Thailand, and a description of the present admissions' policies and procedures.

The sample consisted of 368 students in the faculties of science at Chulalongkorn, Kasetsart, and Chiangmai Universities, all of whom completed their first year in March, 1968. Sixty students were dropped from the original population of 428, because of missing biodata, test scores, or their having dropped out of school. From the application forms for admittance to the university, biodata was taken for each individual on the following things: sex, age, race, parent's residence, parent's profession, type of secondary school attended, year of secondary graduation,

attendance at a coaching school, previous attendance at a university, and whether they had worked following secondary graduation. The last two variables were dropped from the analysis, due to incomplete data. The Maw Saw 5 Examination scores for each student, by subject area, were taken from the records at the Ministry of Education, and the JHEEE scores were taken from the records at the National Education Council. The dependent variables, scores on the first year of work at the university, were taken from the student transcripts in the registrar's office at each faculty.

Prior to dealing with results of the study on each of the sociological and academic variables, an attempt was made to give meaningful background information to aid in the interpretation of the data. This information was taken from studies conducted by historians, anthropologists, sociologists, political scientists and other researchers, who have written about Thailand. Zero-order correlations were run on the computer to test the relationship between each of the variables, and multiple correlations were used to test the predictive power of the various examination scores when used in combination.

Conclusions and Findings

Sex and Academic Achievement

1. Women are rapidly achieving equality in Thai society and is evidenced by their increasing role in business, government, and education, their rising

literacy rate, and their increasing numbers in the universities. Whereas in 1961, women made up only 25.7% of the university, they made up 42.5% in 1967.

2. Women performed at a higher level on the MS5 Examination, but were outperformed by the men on the JHEEE.
3. In their first year at the university, women performed at a significantly higher level than men in the Chulalongkorn Day and Chiangmai Science Faculties, and at a higher, though not significantly higher, in the Chulalongkorn Evening Science Faculty, but were outperformed by the men at Kasetsart University.
4. Women generally performed highest in English and biology, while men did better in physics and mathematics.

Cultural Differences and Academic Achievement

5. The Chinese student population is significantly larger than the size of their race in the society at large.
6. Chinese success on obtaining admission to the university is due in part to their social status, wealth, family structure, achievement motivation, persecution of them by the Thai majority, and historical factors.
7. Correlations of race and achievement on the examinations and in the university were in favor of the Chinese, but only at Chiangmai were the correlations

significant at the .05 level.

Residence and Academic Achievement

8. Rural attitudes towards education are an important factor in the small number of rural students who reach the university.
9. The costs of education, failure to identify good rural students at an early age and poor facilities, teachers and equipment, all contribute to the lack of opportunity for rural students to reach the university.
10. Based on university enrollments and the population of an area, students from Bangkok-Thonburi have the best chance of attaining a university education, followed by students from the Central Plains and the South. The students from the North have a poorer chance, with the Northeast having by far the smallest percentage of students for the size of its population.
11. Students recognize the need for education in the city, if they are to gain entrance to the university, so that Bangkok accounts for 40% of all MS3 graduates and 75% of all MS5 graduates.
12. Although students from the urban areas have a substantially better chance of gaining admission to the university, only in the subject field of English did they do significantly better than those from rural areas.

Parent's Occupation and Academic Achievement

13. Students from the homes of government officials have the best chance of gaining a university education, based on the size of the occupational group in the population at large. Students from farming homes have the smallest chance.
14. Less than six percent of the university students come from homes, which have an income of 500 Baht or less per month, the average income in Thailand.
15. Teaching and medicine are ranked as high status professions, while business and farming are generally looked down upon by university students.
16. Children from the homes of government officials and business proprietors outperformed those from agricultural or employee homes in the university, but only in English were the correlations significant at the .05 level.

Age Factors and Academic Achievement

17. The younger the student, the higher the passing rate on the JHEEE.
18. The younger students did significantly better on the MS5 Examination and in their first year at the university.

Buddhism and Education

19. Buddhist teachings place a high emphasis on education.
20. The educated class and urban people are generally

less devout than the rural, less well educated people.

21. Only in recent years has the educational system broken away from the dominance of the Buddhist religion.

Private Education and Academic Achievement

22. Almost 50% of the secondary school students are enrolled in private schools.
23. The students from private schools have a significantly lower passing rate on the JHEEE, when compared to students from public secondary schools; 30.52% versus 56.47% in Bangkok-Thonburi and 33.87% versus 35.09% in the rest of the country.
24. The students in the science sample from public schools did significantly better on the MS5 examination, but were outperformed by private school graduates in the JHEEE.
25. The highest correlations in favor of private school students were on the English examinations.
26. There was no significant difference between public and private school graduates on university achievement, although the correlations tended to favor the public school graduate.

Coaching Schools and Academic Achievement

27. The coaching schools enrolled 44% of the successful candidates for university admission. No statistics on the unsuccessful candidates were available.

28. The coaching schools are a significant educational and business institution hiring hundreds of university professors and public school teachers, and enrolling many thousands of Thai students each year.
29. No significant results were obtained when attendance at the coaching school was compared with achievement on the JHEEE for which it allegedly prepares. In three of the six scores, students who had not attended a coaching school outperformed those who had.

Choice of Faculty and Achievement

30. Only in the Chulalongkorn Day Science Faculty did students who had made it their first or second choice faculty, significantly outperform those who had made it a lower choice.

Science Education and Academic Achievement

31. Medicine and its related fields along with engineering are the faculties to which the top science students most desire to gain admittance.
32. Science education at the secondary and university levels suffers from poor instruction, lack of facilities, equipment and libraries, overcrowded classrooms, overemphasis upon examinations and lack of good textbooks and teachers' syllabi.
33. A major factor in low achievement is the inability of students to read and understand the English language. Many of the primary and most of the

secondary textbooks are in English, and most science faculties have several English speaking faculty members.

34. Students generally did better on the MS5 Examination than on the JHEEE.
35. Scores on the MS5 Examination were highest in mathematics followed by physics, biology and chemistry.
36. In only one faculty, the Faculty of Medicine at the University of Medical Sciences was an average score of 60 (the passing score in the universities) attained on the five examinations.
37. On the JHEEE, scores were generally highest in biology, followed by chemistry, mathematics and physics.
38. Wastage rates, based on those who failed courses and those who passed, but were made to repeat the course ranged from 5% in some faculties to 89% in physics at one faculty.
39. In the most prestigious science faculty, Chulalongkorn University, the wastage rates in the four subjects were: physics, 40.60%; biology 42.30%; chemistry 47.00%; and mathematics 60.70%.

English Ability and Academic Achievement

40. Problems in the development of English language skills include: a lack of trained teachers, a large duplication of effort between universities, large classes, poor teaching techniques, lack of integrated

and graded materials, poor library facilities and too great an emphasis on grammar and not enough on reading and speaking skills.

41. The English ability of senior English majors was such that less than 20% could begin a graduate program in the United States or England, and only 9% of the science majors reached this level of proficiency.
42. Students received higher scores on English examinations and at the university than they did in any of the sciences with the exception of biology. This led to a large number of cases where students were admitted to a science faculty on the basis of an English score rather than demonstrated ability in the sciences.

The Prediction of Academic Performance

43. The biodata information did not contribute significantly to the prediction of performance on most tests or in the university, with the exception of a significant positive correlation of the female sex, urbanism, governmental or business home, and private schools with English scores.
44. Both zero-order correlations and multiple correlations proved to be higher in most cases, when MS5 tests were used as the basis of prediction, rather than the JHEEE.
45. The best predictors, regardless of the subject field

were the MS5 and the JHEEE English tests.

46. The MS5 mathematics test proved to be the best predictor of mathematics and physics grades in the university.
47. Both biology tests were good predictors of success in biology at the university level.
48. The MS5 social science test proved to be the best predictor of success in the Chulalongkorn Evening Science Faculty in most subject fields.
49. The poorest predictors on either examination were the mathematics, chemistry, and physics tests of the JHEEE.
50. The total score on the JHEEE now used for admittance to the university provided zero-order correlations of $-.10$ to $.33$ with grades in the university.
51. The total MS5 score provided zero order correlations of $-.04$ to $.54$ with grades in the university.
52. Multiple correlations using the best combination of tests from the two examinations, provided correlations ranging from $.28$ for the chemistry grade at Chulalongkorn all the way up to $.98$ for the total grades at Chiangmai. All the multiple correlations were within the $.05$ level of significance, and all but four were within the $.01$ level.
53. The highest multiple correlations were obtained for Chiangmai University with the lowest for the Day students in the Science Faculty at Chulalongkorn University.

Discussion and Recommendations

In this section, an attempt has been made to provide insight into some of the probable causes of the results obtained in the study, and on the basis of those results to make recommendations concerning admission to the universities of Thailand. It is hoped that the proposals are viable alternatives to present policy.

Women in the Universities The role of women in Thai society is rapidly changing, and one of the major causes has been the growing educational opportunity afforded to them. Women are to be found in ever increasing numbers at all levels of education, and they are finding their way into numerous government, educational and business positions. The Buddhist religion, with its emphasis on merit-making for men, and the loosely knit family structure have given Thai women freedom to enter these occupations.)

The success of women on the MS5 Examination could be due to many factors. Studies in the United States and other countries have shown women to perform at a higher level in secondary schools, due to the nature of the schools, the maturation level, and the motivation to succeed. The same factors may be at work in Thailand. It may also be due in part to the nature of the examination, which is essentially the memorization and repetition type of test on which women generally do better than men. The women's success on the verbal section of the examination is also in line with findings in other countries, where men generally

do better in the mathematical and scientific areas. The higher scores of the men on the JHEEE may be due to this fact that men generally do better in science and mathematics, which accounted for 80% of the JHEEE score.

The success of women in their first year at the university may be due to many of the same factors, which caused them to achieve at a higher level in secondary school, in addition to which Thai society circumscribes more closely what a woman may or may not do, while the male university students can usually find many things other than studying to do. It may be true that men outperform women at the junior and senior levels, though there is no evidence of this at the present time. (Another factor leading to the ~~success~~ of ~~women~~ may be the fact that many of the best ~~male~~ students elect the medicine and engineering faculties, leaving the science faculties to the better women students.)

Chinese in the Universities The high proportion of Chinese students in the universities, particularly in those faculties of highest standing, and their greater success on the MS5 Examination, ^{and} the JHEEE, (and in the first year at the university) would seem to indicate that there must be some historical, cultural, economic or social factors which cause them to achieve at a higher level than the Thais. Their family structure and the fact that the Chinese students are generally from families which are both wealthier and have a higher social status have been pointed to as reasons for their success. Another important factor,

(alluded to by several Chinese and Thai who were interviewed, is the discrimination which the Chinese have felt in Thailand. This discrimination, though not as great as in most other Southeast Asian countries, may be an important factor in motivating the Chinese to succeed and prove himself to the society.

Rural Students in the Universities Students from outside Bangkok have a much smaller chance of gaining access to a university. This is due in part to economic factors such as the cost of education, but also to the attitudes of the rural population towards modern education. Other factors are the low quality of elementary and secondary education and poor facilities outside of Bangkok, which makes it difficult for the student from the rural areas to pass the entrance examinations. The exodus of the best students to the cities tends to continue the inequalities which now exist. The best teachers move to the provincial capitals and eventually to Bangkok, leaving mainly the young, the untrained, and the incompetent to teach in the rural areas.

(The results of the ^{new study} study (do not) indicate any significant difference between rural and urban students on the examinations and the universities. This may be due in part to the fact that only the very best rural students made it into the universities, and could also be due to a greater desire on the part of the rural student to succeed and escape his background, as it has been shown that few ever return to their homes after graduating from the university.

The greater success of urban students in English is due in part to the better teaching they receive, but probably more importantly to the greater contact they have with English speaking foreigners and greater access to English magazines and books. Another factor in the lack of significant difference in the university between the two groups may be the fact that a large percentage of the rural students attended secondary school in Bangkok.

Recommendations 1. There must be a greater expenditure on teachers and facilities for the rural schools than for the city schools, in order to raise them to a level of equality.

2. There must be funds made available at the local level to pay the expenses for such things as books, supplies, and transportation, of those students who cannot afford to pay for them, so that no student will be forced to withdraw from school for financial reasons.

3. A stepped-up program needs to be carried on to involve the school in the life of the community and to show the people the value of education. The education also needs to be made more relevant to the needs of the people.

4. A testing program needs to be put into effect which will identify rural students, who are capable of higher education, but who may not have been able to pass the MS5 Examination or the JHEEE, due to a poor educational background.

Parent's Occupation The success of students from the homes

of government officials and business proprietors in gaining admission to the university is due to many economic and social factors at work in the society. It is also due to the greater educational opportunity and better education received in Bangkok, where most of these students live. The fact that students from agricultural homes performed at the same or nearly the same level in the university may be due to the fact that only the very best from these homes made it that far, and there is a greater desire on their part to escape their agricultural background. (Several deans and faculty members mentioned the lack of interest in agriculture on the part of students in general, and more particularly by many students in the agricultural faculties. The reasons for this are numerous, including the low prestige and low pay, but there is another factor that a change in the University Admission's Policy can help to solve. Less than 10% of those admitted to the agriculture faculties are from agricultural homes. The vast majority are from business and government homes who grew up in the city. Most of these students are in the agriculture faculty, not out of choice, but because they could not get into another faculty. Once again, less than 10% made the agriculture faculty their first choice. Large numbers of these students drop out after one year or retake the JHEEE to gain admittance to another faculty.

Recommendations 1. Due to the agricultural nature of the society and the need for highly committed, trained specialists

in this critical area, greater efforts must be made to attract top students from agricultural backgrounds. A requirement for admittance to a faculty should be a genuine interest in the field. This is particularly true of agriculture.

2. There should be no discrimination on the basis of parent's occupation. This will mean a greater effort to build up rural schools, provide scholarships to poor students from agricultural homes, and other moves to end the discrimination which now exists, which though not overt, is nevertheless very real.

Coaching Schools The results of the study would seem to be in agreement with the subjective judgments of many Thai educators about the value of the coaching schools. They are of more psychological value than actual value to the student, and they do a great deal of harm by undercutting the role of the secondary school and contributing to the notion that education is nothing more than the preparing for and passing of examinations. They do provide extra money for teachers and professors, but in so doing they deprive, often very poor, young people of needed resources for further education. They also hurt the teaching in the secondary schools and universities, as the teachers have to split their time between the institutions, doing an injustice to both places. The materials are, for the most part, repetitious, and the teaching methodology in many of the schools leaves a lot to be desired.

Recommendations 1. If the MS5 Examination, an aptitude test and other factors are used in choosing students for the universities, the coaching schools will, in all likelihood, cease to exist, thereby restoring some of the confidence of the students in the secondary schools and cutting down on an unnecessary expenditure of funds.

2. Until such time as fundamental changes are made in the admission's process, the coaching schools must be placed under much stricter supervision by the Ministry of Education and the National Education Council, and students should be informed of the lack of evidence to support the claim that these schools aid substantially in a student's gaining admittance to the university.

Private Schools At one time the private secondary schools were considered to be superior, but in recent years the government has put large sums of money into the public schools, so that today the large public schools are the ones to which the better students seek admission. The fact that students from private schools performed at the highest level in English may be due to the fact that many of the private schools are run by missionary groups and have foreigners teaching the English classes. The low level of achievement in the sciences by private school students may be due in part to the difficulty of attracting qualified teachers of science to the low paying private schools, and also the high cost of laboratories and science equipment, (which private schools are not willing to pay.) The

cause of the private school students performing at a higher level on the JHEEE may be due to the best public school students going into medicine and engineering.

Choice of Faculty The study provides no conclusive evidence that students admitted to a high choice or low choice faculty do better in the university. It would therefore seem logical to maintain the present system, whereby students were admitted to the faculties on the basis of their scores and their choice.

Recommendation With the use of the computer, a student should be allowed more than six choices, perhaps 15 or 20, thus making sure that the most highly qualified students gain admittance to some faculty.

Science Education The low achievement levels in examinations and in the universities are due to many factors at the secondary school level: unqualified teachers, lack of equipment and textbooks, poor teaching methods, overemphasis on examinations, lack of problem-solving ability development, and many other factors. These same factors are at work at the university level, as is the factor of the new freedom which the university student has, which often contributes to a lack of study and low achievement. A further difficulty would seem to be the gap between the secondary and university science curricula. University professors must also ask themselves if they are not perhaps partly at fault when 70-90% of their students fail. Perhaps university evaluation procedures should be brought into

question along with the usual complaints about the inadequate secondary school preparation.

- Recommendations
1. Students who pass a course, should not be made to repeat it, regardless of how they did in their other subjects. The present policy leads to a tremendous wastage of time and effort.
 2. Greater efforts to coordinate the university and secondary science curricula need to be made.
 3. University professors need to analyze their own teaching methods and evaluation procedures to see if they might not be partially at fault for the high failure rate.
 4. Greater efforts need to be made to develop problem solving and critical thinking abilities. The use of BSCS and PSSC materials in the secondary schools should be helpful, but similar materials need to be developed for the universities.

The Prediction of Academic Performance The fact that the biodata information did not aid in the prediction of academic success is due in part to the comparative homogeneity of the student population. There is not a significant portion of the student population from rural, agricultural backgrounds, and those that do make it are generally the "cream of the crop," so no great differences should be expected in the university.

The MS5 Examination's greater validity as a predictor can be explained in part by its greater comprehensiveness. In most subject areas, it tends to be considerably longer

than the JHEEE, thus testing more of a student's knowledge in a given area. Another probable reason for its greater validity is the fact that the MS5 Examination acts as a final examination for a full year's work in much the same way that final examinations at the universities do, whereas the JHEEE is not directly geared to any previous textbooks or lectures. The English tests on both examinations proved to be good predictors of success, because of the great importance placed on the ability to read English in the universities. Many primary and most secondary texts are in English and there are a considerable number of English speaking professors at each university.

The poor predictive ability of tests for the Chulalongkorn Evening Science Faculty may be due in part to the hours of the day in which these students are forced to attend classes, and also the fact that they have the full day off in which to work or do other things besides study. That the highest predictions were obtained at Chiangmai University came as no surprise, due to their five point grading system rather than the 100 point scale used in the other faculties. The fact that essay questions are used, that the tests have not been tested for reliability, that norms have not been established, and that few attempts at standardization have been made, all contribute to the low validity levels achieved.

Recommendations 1. The MS5 Test should be used as the final admission's device to the university. This exami-

nation has proven to be the better predictor of success, and it would cut out duplication of effort in the giving of two examinations.

2. Testing experts should be involved in the development of standardized instruments.
3. Greater emphasis should be placed on multiple choice questions, and where essay questions are used, at least three people should grade each question.
4. More questions testing critical thinking and problem-solving abilities must be developed.
5. Greater security precautions must be taken to guard the secrecy of the questions and the examination.
6. The grading of the objective examinations should be turned over to the computer as soon as possible.
7. The NEC should work closely with the Ministry of Education, the universities, and the secondary schools to aid in the development of a valid and reliable MS5 Examination.
8. Experiments similar to the eight-year study in the United States should be conducted to see what effect the curriculum followed in the secondary school has on success in the university.

Regional Universities The regional universities were created with the purpose of spreading the benefits of higher education to regions of the country other than Bangkok. With a uniform admission's policy for students from all parts of the country, however, the regional universities have ended up educating a majority of students

from other sections, including large numbers of Bangkok students. The figures for the 1967 entering class give some indication of this problem. Of 217 entrants to Khon Kaen University only 68 were from the Northeast, while 55 were from Bangkok-Thonburi. Only 332 of the 859 entrants to Chiangmai University were from the North, while only 18 of the 50 entrants to the new University of the South were from the South. If the regional universities are to serve their constituency, special admission's policies must be set up for each of them. The argument has been raised that different admissions' standards would tend to classify them as second-rate institutions. This argument can be countered by the facts, which show that the poorer students, for the most part, are the ones who end up going to the regional universities, so that they already have a reputation which does not match that of the Bangkok Universities. The professors and administrators at the regional universities stated that one of their major problems was the fact that students from Bangkok looked down upon their institutions, and often stayed only one year after which they would retake the entrance examination for admittance to a Bangkok University. These students were also responsible for much of the trouble on the campuses. It is also true that few, if any, of the students from Bangkok have an interest in the region, and almost none remain there after graduation. If the people of the region are to begin to feel that it is their university, a new

admission's policy must be set up.

Recommendations 1. Students from the region should be given priority, with from 70-80% of each entering class coming from that region.

2. Scholarships should be increased in size and number to attract top students from the area to attend their regional universities.

3. A broader extension program should be set up to acquaint the people of the region, particularly the students, with the university and what it has to offer.

4. Due to the fact that students from the regions perform at a lower level on the MS5 and JHEEE, a certain percentage of the students attending MS5 in the region should be guaranteed admission on the basis of their secondary work. This figure will vary from region to region, but the top 10-20% of the MS5 students could be admitted under this policy.

5. A broad upgrading of the secondary schools throughout the country, outside of Bangkok, must take place, and the recommendation of the Secondary Study Report that students be required to attend a school in their home area, should be enforced, to halt the flow of top students to Bangkok.

6. Remedial programs may need to be set up in the summers to prepare rural students who have the intelligence but not the educational background for college work.

Admissions' Policy and Procedures As was stated in Chapter 3, University Admission is a process conducted over many

years, not a decision made after a student finishes the secondary school. With this basic concept in mind, it becomes necessary to consider education at the elementary and secondary levels, not just the score a student receives on an entrance examination. By the time the final decision is made, less than 1% of the original admission's group remains. It is thus rather obvious that many decisions, both formal and informal, have been made long before a student reaches the JHEEE. It could be argued that admission to higher education begins at birth, as the chances of a student's receiving a university education are vitally affected by the family into which he is born, the area of country in which he resides, the racial group to which he belongs, his or her sex, the economic status of the parents, and a great many other factors beyond the control of the individual. There are examinations after Pratom⁷, MS³ and MS⁵ which a student must pass, as well as entrance examinations to MS¹ and MS⁴. All of these formal hurdles limit the size of the admission's group. At the present time, limitations of opportunity and examinations are the major selection devices. A third device, a counseling and guidance system, is being started in the comprehensive school, but must be broadened for use in all the secondary schools. This must be developed to aid students in assessing their own abilities and to guide them in making choices for higher education.

The schools must also look on examinations as more

than selection devices. They must be viewed as part of the guidance process in which students and teachers are made aware of areas of strength and weakness. Testing should be used for predicting and planning, not just ~~summing~~ up. In addition to testing as part of the guidance process, the students' abilities, interests, vocational objectives and personal or family situations must be taken into consideration.

With the expansion of secondary education, the selection process has shifted almost completely to higher education. This has led to a view by the universities that the secondary schools are incapable of making reliable and realistic judgements about their student's ability to do university work. It is also evidenced in the control that the universities have been gaining over what is taught and the examination system. This has increasingly tied the hands of the secondary schools, who dare not innovate, adjust their standards, or take any action which might hurt their students' chances of passing the entrance examinations. They are increasingly tied to the syllabi and examinations, as is evidenced by the study on the amount of time spent in reviewing for and taking examinations.

This routinization of secondary education in Thailand has led to a loss of respect for the secondary schools. The results of this have often been to lower teacher morale, and a feeling on the part of students that they must attend a coaching school, if they are to be well-prepared for the JHEEE.

Another area of difficulty in the admission's process is the large number of repeaters. Approximately forty percent of those taking the examination in 1967 were students who had graduated in previous years, and in all likelihood were taking it for the second or third time. This creates a real pressure for admission, when there is no limit on how many times a student may take the examination. Many have advocated a limit on the number of times a student may take the examination, but this limitation should only be put into effect when there is good reason to believe that the system in use is choosing the best possible students. The system in use at the present time has been shown to be inadequate and thus any limitation would keep many qualified students from gaining entrance to the university. The results of the study showed no significant difference in the university achievement between those who entered immediately after secondary school, and those who were forced to retake the entrance examination before gaining admittance.

In most studies dealing with university admissions, the secondary school grades or rank in class have consistently emerged as the best predictors of academic success in the university. It would be an easy thing to recommend the use of these factors in university admission in Thailand, but until basic changes in the secondary schools are made, such a recommendation would have little effect. At the MS5 level, the students' grades for the

year are his scores on the MS5 Examination and the same is true for the MS3 Examination scores. At the MS1, 2 and 4 levels, the students grades are based from 50-90% on one examination at the end of the year. Unless greater emphasis is given to daily work, quizzes, papers, and class participation in the secondary schools, it is doubtful that using grades from previous years would add a great deal to the process of choosing the students best qualified for the university. With this discussion as a background, the following changes are recommended for the admissions' policies and procedures.

Recommendations 1. Greater emphasis needs to be given in the secondary schools to daily work, class participation, critical thinking abilities and writing ability, with a decreasing emphasis upon the final examination as the only grading device.

2. A comprehensive guidance and counseling system needs to be put into effect in the secondary schools, at the NEC and in the universities, to aid students in making choices of faculties and career choices in line with their abilities, interests, and vocational objectives.

3. A large scholarship program must be put into effect at the secondary level to aid students, who are capable of college work, but may drop out due to lack of financial resources. A similarly large scholarship and financial aids program must be set up to aid the needy students in the universities, not just to reward those who do well

scholastically.

4. The universities must grant a new respect to secondary school teachers and administrators by asking for and making use of their recommendations on students. Along with recommendations, the secondary schools should be asked to rank their students, thus insuring that all students are not given high grades just to get them into the university.

5. A carefully designed admission's form should be developed, which not only gives biodata on the student, but also elicits information about the student's character, motivation, and other relevant factors. This form should be filled out, not only by the student, but also by the principal and teachers, who know the student best.

6. An academic aptitude test should be developed, as rapidly as possible, to be used in addition to well designed academic achievement tests.

7. An interviewing program should be set up by each faculty to talk with the candidates personally, thus providing one more method of judging the abilities and motivations of the students.

Summary of Recommended Admissions Process

1. In August, the NEC should administer an academic aptitude test, the results of which could be made rapidly available through machine scoring. The results of the test would be given to the student and to guidance counselors in the secondary schools, who would use them in aiding the student in his choice of faculties, and on whether he

should continue his education beyond the secondary school.

2. In September, the student would fill out an application form. On this form, he would be asked to give not only biographical information, but also to answer questions concerning his interests, vocational objectives, motivations, and also the faculties to which he wishes to be admitted.

3. The student would then request the principal and/or teacher, who knew him best, to fill out a similar form answering questions about his character, attitudes, academic ability and motivation. This form would be mailed directly to the NEC by the school.

4. The secondary schools would be asked to send a ranking of all their MSJ students based on their achievement during the first four years of work. This ranking could prevent a secondary school from giving all their students superlative ratings.

5. The NEC would then compile a list of candidates based on their rank in their first four years, of secondary school, their scores on aptitude tests, recommendations of their secondary school teachers and principals, and a subjective evaluation of their application. The individual university faculties could then be informed of the names of those students who would seem to be good prospects for their faculty and who had made it one of their top choices.

6. Each university faculty would then be free to interview any or all of the candidates wishing admission, thus adding one more factor to the evaluation procedure. This could

take place from October through February.

7. In March, the MS5 Examination would be given and this would serve as the final step in the admission's process. Students would be accepted to their highest choice faculty based on six factors rather than the one now in use.

Factors to be Considered in Admissions

- a. Rank in class after MS1-4.
- b. Academic Aptitude test score.
- c. Recommendation of secondary school.
- d. Application Form-Biodata Information.
- e. Interview rating.
- f. MS5 examination.

The admission's policy presented above is a viable alternative to the present system in which only one factor, the score on the JHEEE, is used. It will take a greater investment in time, manpower and finances, but if the best candidates are to be chosen, it seems that the selection should not be made irretrievably at a fixed point in time or by a single examination, but rather as the outcome of a many-sided process taking as much relevant evidence into consideration as possible. This process should be accompanied by careful guidance and counseling in the secondary schools and the universities, in order to take the individual capacities of the students and the national interests into consideration.

Implications for Further Study

1. An analysis of the reasons for the high failure rate in the universities needs to be conducted, looking at such critical factors as the gap between the secondary and higher level curricula, the evaluation procedure and the teaching methods.
2. A study of the ability of various factors such as secondary school rank, achievement test scores, aptitude test scores, student personality, and socioeconomic status to predict success in the universities, not just for the first year, but for all four years would be of value.
3. A study of the achievement level of women throughout their four years of higher education, and a follow-up study to see how many make use of their education and work after graduation from the university.
4. Using the data on a revised admission's form, an annual survey of student background should be conducted.
5. Causes of drop-outs at all levels should be examined and programs set in motion to combat them.
6. A continuing analysis of all tests used for admission or graduation should be made for reliability and validity.
7. A thorough analysis of the coaching schools should be conducted, to gain further information about them and their role in the educational system and the economy of the country.
8. The impact of the translated BSCS and PSSC materials on teaching and learning in the sciences would be of

value.

9. A detailed analysis of the private schools and their success or failure in adequately preparing students for the universities would be of benefit.

Possibilities of Change within the Thai Bureaucracy

A key element in understanding the Thai people is the difference between external behavior and internal desires. This difference is of the utmost importance in the bringing about of change through and in the bureaucracy. One can often obtain agreement to two completely contradictory statements, due to the fact that Thai society places great emphasis on external respect, agreement, subservience, even though the individual may disagree violently internally. This is true in the physical as well as the social realm, where the Thai will often take on outward signs of modernity with no inward change of attitudes. As Thailand changes from a rural agricultural to an urban industrial society, a conflict between the old and the new, between the traditional and the modern, has developed. This conflict has and will continue to bring about change to Thailand. Since 1932, Thailand has had three major coups d'etat, 11 major revolutions, five constitutions and 21 changes in administration. On the surface this would seem to indicate extreme chaos, but on looking more deeply one sees a persistence of the same laws, institutions and leaders, year after year. Each new government has accepted the goals and responsibilities of its forerunners. It has

been characterized as a "paradoxical stable instability, an inconstant constancy."¹ The major cause of this stability has been the politically neutral bureaucracy, which has been loyal to whatever government was in power.

The bureaucracy in Thailand is the major structure in Thai society, which both maintains the traditional and brings about change. For this reason, it is imperative that the bureaucracy be looked at, to see how it works and how changes can be brought about through it.

The most pronounced characteristic of the Thai bureaucracy is that changes come from the top. The Thai society at large and the Thai bureaucracy both place a great deal of importance in hierarchical status, so that it is only persons of high status who can propose significant changes in the manner of doing things. From childhood, the Thais learn a respect for their elders and for those of higher status, and these values are greatly enhanced in the bureaucracy. This vertical orientation means that many decisions which should have been made at a lower level, are sent all the way to the cabinet for action. An example of this is the annual activity of the Cabinet on the JHEEE something which in other bureaucracies would seldom, if ever, be discussed at such a high level.

This characteristic of upward referral often leads to a delay in decision-making or a "passing-the-buck." Lower

¹David Wilson, Politics in Thailand (Ithaca: Cornell University Press, 1962), p. 274.

officials, fearful of making a wrong decision or of offending their superiors will often substitute delay for a "no" answer in hopes that the petitioner will withdraw his request.² A personal experience illustrates this tendency to avoid individual responsibility. A minor official in the Ministry of Education, fearful of his position, stated that he could only give statistical facts and would not offer opinions on any subject, even those topics which he was the most knowledgeable of all government officials. He, instead, made sure that his superior was present to give the opinions. This authoritarian, hierarchical characteristic is of great importance to bringing about change in university admissions. All decisions concerning the universities are the responsibility of the National Education Council, which is under the Office of the Prime Minister. This often means that decisions which in other countries would be made by the individual university are made instead by the Secretary-General of the National Education Council, or in some cases by the Prime Minister himself. This is not to imply complete passivity on the part of university officials, as it is in the universities that the pressures to communicate upward are perhaps the greatest. This is due, in part, to the fact that many university officials have received

²James N. Mosel, "Thai Administrative Behavior," William J. Siffin (ed.), Toward the Comparative Study of Public Administration (Bloomington: Indiana University Press, 1957), p. 318.

foreign training and are filled with ideas which they would like to see implemented. This is a source of growing tension, but also one of great change.

A second important characteristic of the Thai bureaucracy is that of personalism, which can be defined as "the reliance upon personal relationships and personal concerns as primary basis for behavior within the system."³ This personalism is the opposite of the legal-rational bureaucratic model of the West, and leads to a system which contains many personal associations based on extraorganizational relationships. It also means that a high ranking official will create a personal communications network to gain information. These things along with the fact that personal preferences play an important role in promotions or new assignments are much in evidence in the NEC, where certain individuals seem destined for high governmental positions due to personal friendships with important figures. This personalism often means that subordinates may not be treated equally, as competent staff members may be overloaded, while ineffective ones are given little to do, or are given new titles but little responsibility.⁴

Official interactions are more personalized than in most bureaucracies and there is an elaborate informal organization. This is true on both a large scale and

³William J. Siffin, The Thai Bureaucracy: Institutional Change and Development (Honolulu: East-West Center Press, 1966), pp. 161-162.

⁴Ibid., p. 195.

within individual entities such as the NEC. "Expectations and predictability of others rests more on a knowledge of a man's personal attributes than upon knowledge of the standard behavior prescribed by the office he holds."⁵

This quotation summarizes the role of the various officials in the NEC, as the preferences and prejudices of important individuals are soon known, and the possibility of change is dependent upon personal attributes. It is well known also, that political power or lack of it is an important factor in the current state of both the Ministry of Education and the NEC, as the positions of Minister or Secretary-General are more dependent upon the individuals holding those jobs than on the office itself.

This characteristic of personalism is of real importance in the bringing about of changes in the university admissions policy. It means that if certain individuals can be convinced of needed changes, there is a real likelihood of their being made. It is also true that certain individuals, if opposed to change, can prevent any further action. The leadership in education in Thailand today is not strong, and as a result, education has tended to lose out in the competition for funds and has remained static. Those in subordinate positions realize the traditional outlook of their leaders and are not willing to shake the boat, thus under the present leadership change is unlikely in the near future.

⁵Mosel, op. cit., p. 321.

The third major characteristic of the system is that of security. The Thai bureaucracy offers perhaps the only secure position in the society, and consequently attracts a great many for whom this is a basic value. Evidence of the security that the system offers is that people seldom leave it except through retirement, resignation with permission, or serious violation of discipline. The pay is poor in comparison to salaries in the public sector, but most Thai prefer the status and security that the bureaucracy offers than the higher pay and risk of being fired in private business. An annual pay increase is almost automatic and promotions from class to class generally come after a specified period of time.⁶

This desire for security or bureaucratic survival tends to lead to a lack of innovation on the part of many officials. New ideas or new practices are looked on with disfavor, and the traditional way is thought to be best. The effect of this attitude is to do things the way they have always been done, until a change is forced through circumstances or through a directive from above. This security means that many incompetent officials remain in office throughout their lifetime, and the possibility of their removal is so slim that most superiors do not attempt it.

The Thai bureaucracy has several ways which it uses to accomplish goals or reach out in new directions. The

⁶Siffin, op. cit., p. 221.

most common way is to appoint a committee to study a particular problem. Many capable individuals are known to serve on as many as 30 government committees. These men are usually special grade officers, who hold an official position in the bureaucracy, but are paid for their many committee assignments. They often hold part-time teaching positions in addition to their many other responsibilities.

Committees tend to be used as a communications device, and decisions made in the committees tend to reflect the opinion of the highest-status participant. The committees are also an evidence of the quest for security, as a decision made by a committee means shared responsibility of the results, and is not necessarily an evidence of a widely assessed decision. Members of the bureaucracy are paid extra for their committee work, according to their civil service rank, thus one finds great competition for membership.

One step beyond the use of committees is the appointing of a commission and the creation of a new division or section. Even in cases where responsibility has been assigned, if the work load is expanded or new duties are given, it is the usual process to create a new section or appoint a commission. The NEC's recent restructuring is an example of this expansion through the creation of new sections, and the creation of the University Development Commission is evidence of a case where a new organization was created to carry on tasks over which other groups

already had authority. This is also true of the English Language Center. One of the causes of this proliferation is the fact that new organizations are often needed to give a new approach and a new impetus to a program. It is also true that many are set up for political reasons, such as the fact that no agreement could be reached between competing groups over who had jurisdiction. This proliferation has led to an increased need for coordination to prevent wasteful repetition of programs, and a competition for limited personnel and other resources.

There can be no doubt that the appointment of new commissions and committees can and does lead to change, but it also can mean a duplication of effort and a lack of confrontation of important issues by those directly responsible for a program.

Another factor to be considered is that there is minimal use made of "hard data" in the system. Vast amounts of statistics are collected and printed, but decision-making tends to be more personal than objective, and the significance of the data lies more in their source than in their content.⁷ An example of this was the collection of statistics on the JHEEE and the MS5 Examinations, which seems to justify the use of the MS5 Examination. The NEC, however, ignored most of the data and made its decision to continue both examinations on personal preferences and

⁷Ibid., p. 236.

prejudices. This subjective approach may be justified to some extent, due to the unreliability of much of the hard data which had been collected, but in recent years this excuse is not as valid due to more reliable procedures and better trained individuals.

The impetus for change in the Thai Bureaucracy often comes from an external source. Foreign advisors from many countries and the United Nations have been and are being used. Advice from a farang (foreigner) is often accepted, even though a Thai may have been saying the same thing for many years. There is evidence also that foreign advisors are used for political purposes to further a particular cause or aid a Thai official in gaining special concessions. The university officials are known to have made use of foreigners to get larger budgets and new buildings, and some bureaucratic officers seek foreign advisors so that they can obtain office cars and special travel allowances.

Over one-fourth of the current civil service law deals with disciplinary provisions. In the period from 1954 to 1959, almost one percent per year were dismissed from the civil service for dishonesty and other offenses. There is a great discrepancy between the law and actual practice, and Siffin indicates that the Thai moral code is such that acceptance of bribes by an underpaid civil servant is condoned.⁸ There is a vast amount of evidence to support the contention

⁸Ibid., p. 225.

of bribery in the civil service, and the NEC is not exempt from bribery attempts. The university admission's system today is much freer of graft and bribery than when each university conducted its own examinations, but officials of the NEC and university professors told of gifts of money, fruit, liquor, and other items by parents wishing to get their children into the university. There is also evidence to suggest that the universities asked the NEC to send more students to a faculty than they could actually handle, due to pressures from parents, whose children just missed making it into the university.

Perhaps the greatest hope for bringing change into the bureaucracy, into education and into the system of university admissions is through the growing number of people trained overseas. These people return to Thailand filled with new ideas and new hopes for implementing what they have learned. Most are very frustrated by the traditional outlook and slow action of the leadership and this often creates tensions. The "young turks" are the source of many of the new ideas and are the ones who are carrying on many of the programs. They are often forced to work circumspectly, so as not to offend their more traditional superiors, but they are bringing about real changes. An interesting phenomenon seems to have recently come about in that the younger generation of foreign-trained Thais see the foreign advisors from such organizations as USOM and UNESCO, as protectors of the traditional outlook and slow moving

"Mai Pen Rai" Attitude,⁹ and believe that these individuals often do little to bring about any real changes in Thailand.

On student of the Thai Bureaucracy concluded that:

...the Thai system works; it functions fairly smoothly, and on the whole gets things done. This is not to say, of course, that there is no need for improvement, but rather that what many outsiders take as points of criticism is the way in which things get done. The mechanisms for accomplishment are different from those to which these observers are accustomed, but it must be remembered that these are quite natural to the Thai. An when an "inefficiency" is discovered, the factors leading to the inefficiency are often the same factors which are responsible for effectiveness elsewhere in the system.¹⁰

In conclusion, it can be seen that change and progress are taking place and will continue to do so within the Thai bureaucracy. The methods of change or the outcome may not be the same as those to be expected from a legal-rational bureaucracy, but then Thailand is not the West, and the causes and effects are not as evident to Western eyes.

⁹Mai Pen Rai means never mind, or it can wait.

¹⁰Mosel, op. cit., p. 330.

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APPENDICES

Appendix A

Zero Order Correlations of Examination Scores with University Achievement

Univ. and Sub.	Examinations															
	Thai	English	Social Science	Science Total	Physics	Biology	Chemistry	Mathematics	Total	JHEEE	English	Mathematics	Biology	Chemistry	Physics	Total
Chula. Day																
Chem.	.09	.15	.08	-.01	-.08	.14	.20	-.02	-.04		-.06	-.17	.04	.05	-.05	.07
Biol.	.25**	.31**	.18*	.08	.00	.34**	.02	.01	.23**		.13	-.03	.13	.11	-.21*	.08
Phys.	.07	.12	.04	.25*	.10	.22*	.28**	.17	.27**		-.06	.10	-.00	.23**	.13	.33*
Math.	.12	.05	.06	.17	.08	.18*	.23*	.21*	.33**		-.07	.07	-.00	.10	.02	.07
Engl.	.40**	.64**	.17	.00	-.02	.12	.04	.11	.28**		.48**	-.10	.11	.01	-.23*	.13
Total	.23**	.32**	.13	.13	.01	.25**	.18*	.13	.26**		.10	.02	.08	.13	-.07	.18*
Chula. Eve.																
Chem.	-.21	.02	.28*	.02	.00	.08	-.06	.00	-.12		.06	-.13	.23*	.13	-.10	.06
Biol.	.06	.28*	.35**	.09	-.12	.36**	-.10	-.02	.02		.24*	-.21	.47**	-.13	-.15	-.10
Phys.	-.22	-.16	.28*	.27*	.18	.12	.12	.34**	-.05		-.16	-.03	.14	.14	.25*	.13
Math.	-.09	.09	.37**	.22	.22	.22	-.09	.30*	.04		.09	-.13	.13	-.03	.07	.01
Engl.	.30*	.68**	.33**	-.16	-.21	.00	-.22	-.02	.11		.77**	-.13	.18	-.25*	-.41**	-.02
Total	-.04	.24	.42**	.11	.03	.20	-.10	.16	.01		.27*	-.16	.28*	-.04	-.08	.01

Appendix A (continued)

		Examinations															
Univ. and Sub.		Tha1	English	Social Science	Science Total	Physics	Biology	Chemistry	Mathematics	Total	THREE	English	Mathematics	Biology	Chemistry	Physics	Total
Kaset.																	
Chem.		.20	.19	.01	.49**	.35*	.23	.28	.34*	.46**		-.08	.07	.27	.08	.05	.25
Biol.		.23	.24	.06	-.01	-.17	.12	.18	-.05	.11		.14	.02	.11	-.10	.23	.25
Phys.		-.11	.31	-.24	.17	.18	.00	.11	.55**	.38*		.06	.20	-.19	-.01	.22	.20
Math.		-.17	.18	-.30	.12	.05	-.08	.02	.51**	.27		.03	.27	-.15	.03	.12	.21
Engl.		.24	.78**	.49**	.15	.05	.32*	-.10	.07	.52**		.75*	.27	.16	-.17	-.26	.12
Total		.08	.53**	-.04	.27	.13	.15	.14	.48**	.54**		.28	.11	.03	-.04	.13	.32*
Chieng.																	
Chem.		.10	.15	.12	.14	.14	.04	-.06	.28*	.29**		.14	.05	.14	-.04	-.01	.15
Biol.		.20	.10	.04	.18	.13	.20	-.17	.04	.20		.18	.19	.29**	-.16	-.07	.02
Phys.		-.01	.00	.11	.22	.30**	-.08	-.02	.40**	.31		.02	.13	.14	-.04	-.02	.16
Math.		-.05	.10	.00	.06	.07	.01	-.04	.25*	.18		.12	.13	.04	-.07	-.08	.16
Engl.		.21	.57**	.09	-.10	-.03	-.15	-.23*	.05	.25*		.53*	.06	.10	-.24*	-.13	.08
Total		.12	.25*	.11	.16	.20	-.01	-.14	.33**	.37**		.26*	.01	.19*	-.15	-.08	.17

* significant at the .05 level
 ** significant at the .01 level
 — best predictor

APPENDIX B.1

Prediction of Performance at the Chulalongkorn Day Science Faculty

Subject	Tests in their Order of Contribution to Prediction	Percent of Variance Accounted For	Correlation	Level of Significance
Chemistry	MS5 English, JHEEE English, MS5 Biology, MS5 Science Total.	.08	.28	.04
Biology	MS5 Biology, MS5 English, JHEEE Physics, MS5 Thai.	.24	.49	.0005
Physics	MS5 Chemistry, MS5 Biology, JHEEE Mathematics, JHEEE Chemistry, MS5 Mathematics.	.21	.45	.0005
Math.	MS5 Mathematics, MS5 Biology, MS5 Chemistry.	.11	.34	.002
English	MS5 English	.41	.64	.0005
<u>Total</u>	MS5 English, MS5 Biology, JHEEE Chemistry, MS5 Thai, JHEEE Mathematics.	.20	.45	.0005

APPENDIX B.2

Prediction of Performance at the Chulalongkorn Evening Science Faculty

Subject	Tests in their Order of Contribution to Prediction	Percent of Variance Accounted For	Correlation	Level of Significance
Chemistry	MS5 Social Science, MS5 Thai, JHEEE Biology, JHEEE Chemistry.	.23	.48	.006
Biology	JHEEE Biology, MS5 Social Science, MS5 Biology, JHEEE English.	.45	.67	.0005
Physics	MS5 Mathematics, MS5 Social Science, MS5 Chemistry, JHEEE Biology, JHEEE Chemistry, MS5.	.43	.66	.0005
Mathematics	MS5 Mathematics, MS5 Biology, MS5 Social Science, JHEEE Mathematics, MS5 Chemistry.	.44	.67	.0005
<u>English</u>	JHEEE Biology, JHEEE English	.63	.79	.0005
Total	MS5 Social Science, JHEEE Biology, MS5 Biology, MS5 Mathematics, JHEEE English, MS5 Thai, JHEEE Mathematics	.43	.66	.0005

APPENDIX B.3

Prediction of Performance at the Kaset Sart Science Faculty

Subject	Tests in their Order of Contribution to Prediction	Percent of Variance Accounted For	Correlation	Level of Significance
Chemistry	MS5 Science Total, MS5 Social Science, MS5 English, MS5 Chemistry, JHEEE Physics.	.31	.56	.023
Biology	MS5 English, JHEEE Physics, MS5 Physics, MS5 Chemistry, JHEEE Mathematics, MS5 Mathematics, JHEEE English.	.28	.52	.138
Physics	MS5 Mathematics, MS5 English, JHEEE Physics.	.41	.64	.0005
Nath.	MS5 Social Science, MS5 English, MS5 Science Total, MS5 Physics, MS5 Biology.	.32	.57	.019
English	JHEEE English, MS5 English.	.73	.85	.0005
Total	MS5 English, MS5 Social Science, MS5 Science Total, MS5 Physics, JHEEE English, JHEEE Mathematics, JHEEE Physics.	.51	.71	.001

APPENDIX B.4

Prediction of Performance at the Chiengmai Science Faculty

Subject	Tests in their Order of Contribution to Prediction	Percent of Variance Accounted For	Correlation	Level of Significance
Chemistry	MS5 Mathematics, MS5 Biology, JHEEE English.	.28	.53	.0005
Biology	JHEEE Biology, MS5 Chemistry, MS5 Science Total.	.46	.68	.0005
Physics	MS5 Mathematics, MS5 Biology, MS5 Science Total, JHEEE Biology.	.33	.58	.0005
Math.	MS5 Mathematics, MS5 Social Science, JHEEE English.	.26	.51	.0005
English	JHEEE English, MS5 Physics, MS5 Science Total, MS5 English.	.82	.90	.0005
Total	MS5 Chemistry, MS5 Physics, MS5 Science Total, MS5 Social Science, MS5 English.	.97	.98	.0005

APPENDIX C

Sample Questions from the 1967 JHEEE

Chemistry

1. Complete the following chemical formulas. . . (approximately half the test).
2. What is the radioactive isotope of hydrogen?
3. What is an electrolyte?
4. Questions concerning the reactions obtained in certain experiments.

Biology

1. List the three differences between animals and plants.
2. Name four of the endocrine glands.
3. What are the layers of the human skin?
4. Please insert the scientific terms or meaning or an explanation in the blank that follows. . .
5. True or False
 - a. The bone is a dead cell, therefore it has no cells.
 - b. The spider has six legs.
 - c. The Dolphin is a kind of fish.
 - d. The dragonfly has 4 wings.
 - e. The whale is a land animal.
6. The figure below shows the metabolism of the cell.
Please insert the correct work into each space.
7. Please insert the correct scientific term in the blank. . .

APPENDIX C (continued)

Physics

1. When liquid is boiled, the value of steam compression should be: a. equal to the surrounding atmosphere, b. equal to the compression of the atmosphere at that time, c. more than the surrounding atmosphere, d. less than the atmosphere.
2. When you walk past a bus which is waiting at a traffic light, you will feel hot because of: a. the transfer of heat from the engine, b. the carrying of heat by the air from the engine, c. by radiation from the engine, d. from both radiation and transfer by air.

Social Science

1. The differences between life in rural society and the city are...
2. The reasons people move to the city are...
3. The groups in the social construct are...
4. True and False.
 - a. The poverty of the underdeveloped country is due mostly to the poor use of natural resources.
 - b. The major cause of unemployment is that society has nothing for people to do.
 - c. Most of the developing countries are in the Industrial Community
 - d. Efficiency means that production concentrates on quality more than quantity.
 - e. Several questions dealing with the power of

APPENDIX C (continued)

the King and the legislature.

f. Singapore is a State in the Federation of Maylaysia.

g. Monte Carlo is in France.

5. Fill in the Blank.

a. The Capitals of Sierra Leone, the Philippines and Ghana are_____.

b. The River Rhine runs into the_____Ocean.

c. Beirut is in_____.

6. New Zealand has an area a. $\frac{1}{2}$ of Thailand, b. $\frac{1}{4}$ of Thailand, c. $\frac{3}{4}$ of Thailand.

7. Asia a. has the coldest weather in the world, b. not the coldest weather in the world, c. not as cold as in Europe.

8. The first National Library was established in the period of King Rama a. VI, b. IV, c. VII.

9. The Nordic is a branch of a. Polynesian, b. Australoid, c. Caucasian.

10. A cause of the Industrial Revolution is a. Poverty, b. The progress of science, c. Shortage in agricultural production.

APPENDIX C (continued)

English

Three sections dealing with Comprehension-20%, Structure-40%, and Expression-40%.

1. Comprehension section on U.S. and Thai relations and the American West of the Frontier days.

2. Essay

- a. tell what a habit is.

- b. give examples of good habits.

- c. give examples of some of your bad habits

- d. explain how you plan to change or get rid of those bad habits.

3. Essay on What Money Means to a Student like me.

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