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Pongsak

ATTITUDES OF THE STUDENTS TOWARD AGRICULTURAL
EDUCATION IN HIGHER EDUCATION IN THE
COLLEGE OF AGRICULTURE, CHIENGMAI
UNIVERSITY, CHIENGMAI, THAILAND

By

PONGSAK ANGKASITH

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Report Approved:

Robert R. Price

Report Adviser

Robert Terry

Dean of the Graduate College

Name: Pongsak Angkasith

Date of Degree: December, 1974

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: ATTITUDES OF THE STUDENTS TOWARD AGRICULTURAL EDUCATION
IN HIGHER EDUCATION IN THE COLLEGE OF AGRICULTURE,
CHIENGMAI UNIVERSITY, CHIENGMAI, THAILAND

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Major Field: Agricultural Education

Purpose and Method of Study: The purpose of this study was (1) to discover if a significant difference exists between junior and senior students and among those who upon graduation from the College of Agriculture, plan to pursue five different types of occupations, namely: farming and ranching, agricultural business, agricultural teaching, graduate school, extension agent; (2) to determine if significant differences exist in the interest levels and values held in higher education in agriculture by students in five different major fields; (3) to determine if a significant difference exists in interest levels and values held regarding the instructional program in agriculture as perceived by junior students and senior students at the college of agriculture, Chiangmai University; and (4) to investigate the relationship between juniors and seniors and their instructors as perceived by the students. The study was limited to students enrolled in the college during the year 1973-1974, comprising a total of 44 students, 22 juniors and 22 seniors

Findings and Conclusions: The distribution of students according to year in school and according to occupational choice revealed that more juniors chose farming and ranching than any other occupation, while the choice of seniors was equally divided between farming and ranching, agricultural business, and agricultural extension. Students were fairly well satisfied with the quality of instruction and the effectiveness of the instructional methods. No significant differences were discovered between juniors and seniors except for "stimulation of the instruction" and "availability to student." In both items seniors perceived them to be more effective and desirable than did juniors. The difference was found significant at the 0.05 level. A list of scores pertaining to texts and materials produced two significant statements: relevance and ease of understanding. Again seniors scored the items significantly higher than did juniors. The conclusion was drawn that efforts to improve relationships between instructors and students might prove fruitful, especially for juniors. Specific items in which increased efforts may be needed are (1) some improvement in selection of texts and materials, (2) increased use and better selection of audio-visuals, (3) increased use of field trips, (4) improvement of instructor stimulation and motivation.

ADVISER'S APPROVAL

Robert B. Price

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Finally, this study is dedicated to his mother.

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CHAPTER I

INTRODUCTION TO THE PROBLEM

The Importance of Agricultural Education

In "Education for Development" Frederick Harkinson says the basic problem of most of the underdeveloped countries is not a poverty of natural resources but the underdevelopment of their human resources; hence, their first task must be to build up their human capital.¹ To put it in more human terms, that means improving the education, skills and hope, and thus the mental and physical health of their men, women and children. Their limited funds for investment in education must be placed where they will do the most good. Moreover, the "shot gun" approach may create more difficulties than it solves. In some countries the training of more engineers, for examples, may produce nothing but trouble. In any country, developed or underdeveloped, education can become socially malignant if its people do not have a chance and incentive to use it.

There are developing countries where agricultural college graduates are sorely needed, but are not being employed. There are others where all graduates are employed regardless of ability. Agricultural education of the wrong kind creates frustration and adds to the ranks of the

¹ Frederick Harkinson, "Education for Development," in H. W. Hanna source Book for Rural Universities in the Developing Countries (Urban and London, 1966), pp. 7-9.

ployed. Agricultural education of the right kind is indispensable economic progress in any country. Education is both a means and a , and agricultural education is no exception. However, with the emphasis on development, it is more likely that agricultural education will be viewed as a means rather than as a goal, and resources will be allocated to it on this basis. Agriculture must have leadership; it must have teachers; it must have ideas; it must investigate and experiment, translate findings into action, motivate farmers, advise government, understand the relation of agriculture to the rest of the economy, and be very mindful that human beings with values of their own are involved in the whole process.

Agricultural education extends all the way from farmers and the members of their families to those who serve farmers directly and indirectly and to those who form the policies that affect farmers. Institutions of higher education in agriculture must take these facts into account. This is not easy because, until recently, professors have not devoted themselves to the real problems of agriculture. Not very much thought was given to the farmer and his problems, and there was very little attempt to understand in a way that had meaning. With the awakening of these institutions, they will be able to supply a product that is indispensable in agriculture, namely, educated and dedicated manpower. They can and must produce men who have the scientific spirit, who have necessary professional training, and who would rather throw themselves into the stream of agricultural development and all its problems than isolate themselves behind an academic facade which looks respectable but which, upon examination, is found to be sterile.

Education in Thailand

The intention of the Thailand Government to spread institutions of higher learning up country was evidenced in 1960,² when under the recommendation and initiation of the Ministry of Education in the year 1964, the first local universities were set up in Chiangmai Province, in the northern part of the country and in Khonkaen Province, in the northeastern part of the country. At Chiangmai University, it provides higher education for Thai students from every part of the country, but especially students from the northern part of Thailand. The university consists of eight colleges as recommended by the World University Administration UNESCO;⁴ the college of agriculture is one of the colleges of this university. The college provides basic courses in agriculture and advanced courses in agriculture, also.

As the colleges were set up only ten years ago, it is felt that there is still room for development. The author through this research, wishes to identify the areas in which such improvement can be made. With these but humble intention the following research is compiled. The author hopes that the research might find some way through which it can serve as a basic guide for the improvement of education in the college of agriculture in Chiangmai University.

² "Establishment of the Rural Universities in Thailand" (Chiangmai, Thailand, 1973), p. 20.

³ Ibid., p. 20.

⁴ Ibid., p. 20.

Statement of the Problem

The central problem with which the study is concerned is that of identifying certain aspects of attitudes held by students at the college of agriculture, Chiangmai University, towards higher education in agriculture. Difference between the interest levels of the junior and the senior year will be established. If there is a significant difference, the author may be able to spot some strong or weak points of the education in this college which the author hopes will be improved in the future. The ultimate outcome should be that the standard of higher education in Thailand will be improved as well.

Purpose of the Study

The following statements describe the purpose of the study:

1. To discover if a significant difference exists among students who, upon graduation from the college of agriculture will pursue five different types of occupation, namely: farming and ranching, agricultural business, agricultural teacher, graduate school, extension agent.
2. To determine if a significant difference exists in the interest levels and values held in higher education in agriculture by the five different major fields.
3. To determine if a significant difference exists in the interest levels and values held regarding higher education in agriculture by junior students as compared to senior students at the college of agriculture, Chiangmai University.
4. To investigate the relationship between the students in the junior and senior years and their instructors.

Need of the Study

Instructors and materials in a field of agricultural education in universities and in the nation are of vital importance. This study aims to survey the level of interest of the students who are involved in agriculture in Thailand. Within the result of the survey, there will be an analysis of the interest and needs of students in the college by the fulfillment of their educational goals and specific objectives. The researcher hopes to find some things that need to be improved for the better educational instructions and materials in this institution.

Scope and Limitation of the Study

This study is limited to students who enrolled at the college in the year 1973-1974. This research was limited to forty-four students: twenty-two students in junior year and twenty-two students in the senior year, who are in five different major fields and fall into five different future occupations. The materials include: (1) a set of questionnaires, (2) library resources, (3) a handbook from the college of agriculture, Chiangmai University, (4) textbooks from the field of agricultural education, and (5) a report of the University Division, Office of the Prime Minister.

Definition of Terms

The following terms and abbreviations will be used throughout this research.

The College of Agriculture: The college of agriculture, Chiangmai University

Instructors: Refer to the professor and lecturer who worked at the college of agriculture

Junior: Refers to twenty-two students who studied in the third year in 1973-1974

Senior: Refers to twenty-two students who studied in the fourth year in 1973-1974

"T" Test: Refers to the statistical calculation for the degree of significance at the 0.05 level

CHAPTER II

REVIEW OF LITERATURE

Attitudes

Social psychologists of the 1920's¹ focused on attitudes as a central concept in seeking to develop their field as a scientific discipline. Indeed, attitudes seem so pervasive that their study might be expected to cover the full range of human behavior and experience. People tend to develop attitudes toward whatever they experience--toward other people, toward political and religious institutions, toward moral and philosophical systems, apparently toward everything. Yet often enough attitudes fail to stand the test of logical scrutiny; each person seems to be (as the essayist Charles Lamb, 1775-1834, said to himself) a victim of prejudice.

The concept of attitude arises from attempts to account for observed regularities in the behavior of individual persons. One tends to divide others around him into common classes; he may assign people of a given skin color to a single class and behave similarly toward all of

In such case he is said to hold an attitude specific to that class or racial group. He may lump together the rich or the pious or the same and so is assumed to bear a particular attitude toward each

¹"Depth in Knowledge," Encyclopaedia Britannica (Chicago, 1948-49), II, pp. 360-362.

Individuals also classify such objectives as painting or such as battles and, therefore, may be considered to have distinctive attitudes toward non-objective art or toward war.

The most common analysis invests attitudes with perceptual, emotional, and motivational attributes. These three dimensions or components of human activity were suggested at least as early as Plato and have been applied in a variety of psychological contexts ever since. Traditionally the three aspects are called cognitive (having to do with thinking, knowing, believing); affective (emotional); and conative (volitional, striving, acting).

In 1966 Wethington² of the University of Kentucky stated that what a person is, and what he may become, whether he succeeds or fails, whether he receives satisfaction or not, approaches his potential, or allows upon the wheel of fortune--a quick intelligence, a healthy body, the knock-out opportunity--are a result of the attitudes he has acquired.

Of particular interest to school people, and especially to teachers, is the nature of attitudes: how they are acquired, developed, and modified; and most importantly, the degree to which they are related to students' achievement in the subject matter areas. Parents, teachers, friends, and other primary groups influence him; and he acquires the attitudes of these groups.

² Nolan L. Arthur, "A Study of Student Attitudes Toward Selected Subjects of Murray State Colleges in Relation to Academic Achievement and Distance of Residence" (Unpublished M. S. thesis, Oklahoma State University, 1973), pp. 6-7.

Thailand and Agricultural Education

Thailand, the country of 39.9 million people³ is the most important agricultural country in Southeast Asia. About 85 percent of the total population is engaged in farming. The total area of the country is 100,000 acres or about three-fourths of the area of the State of Texas and about 70 percent of the total area used for farming.⁴ Among Southeast Asia countries, Thailand is one of the few that has succeeded in reaching the target of overall rate-of-production increase in agriculture, i.e., a 7.2 percent average production increase as against a 3.2 percent population increase per year at the conclusion of a five year plan ending 1966. By the way of example, the production increase of a few major agriculture products during the eight year period 1959 to 1967 can be cited: rice (as paddy) from 6.77 million metric tons to 11.83 million metric tons, with a slight fluctuation in some years owing to flood or drought; maize from 543,900 tons to 1.0 million tons etc.⁵

From the year 1960 the agricultural production has not met the demand of the population. Thailand needs to improve the production in agriculture for population demand and exportation, by manpower with investment in agriculture and new technology. Agricultural teachers and

3

World Population Data Sheet, Population Reference Bureau (New York: Washington, D.C., 1973), p. 7.

4

Boontian Chareonying, "Organization Adult and Young Farmer Classes in Thailand," (Unpublished M.S. thesis, Oklahoma State University, 1962)

5

Chakratong Tongyai, "Agriculture Goals of Thailand," The Conquest of the 21st Century, A Symposium (New York, April 1, 2, 1968), pp. 30-40.

ion workers are needed.

The Thai Government early recognized that in a modern development m, manpower is a prime consideration and that a country needs d laborers, well trained technicians, and highly qualified scien- economists, and teachers. Thailand, therefore, constantly tried, odest scale, to build up a body of trained personnel. In the post War II period, this effort has been greatly expanded and acceler- hrough foreign aid, which has taken the form, on the one hand, of ng fellowships and scholarships, and, on the other hand, of the ishment of technical schools and the improvement of universities.⁶ Agricultural education in Thailand,⁷ by the Education Law of 1921, ved agriculture in the compulsory primary education. A pilot er training school in agriculture was set up in Bangkok with the of providing agriculture teachers for primary schools, and the late . outside Bangkok was set up in 1928. In 1932 a National Education offered agricultural education in the secondary school and in : education. The University Act of 1943 established Kasetsart Uni- ty (the meaning of Kasetsart was specified as agriculture)⁸ which er provided that the different schools offering agricultural ce and related fields be affiliated with a university. This legis- a provided for higher education in Thailand, with an emphasis much that of land grant universities in the United States of America

6

Tongyai, pp. 30-40.

7

UNESCO, "Agricultural Education in Asia" (Paris, 1971), pp. 206-

8

So Sethaputra, New Modern Thai-English Dictionary (Bangkok, 1971)

1 were set up after the Morrill Act of 1862.⁹ Each land grant col-
(university) deals with sciences basic to agriculture and technolo
ing out of them in three ways: first, through scientific research.
lems of farm people and of resource use are solved; second, the
ages offer education programs for undergraduates leading to the B.
ee; third, each college of agriculture maintains a resident extensi
f on the campus and within the counties of the state to give farmer
makers, and others the information they need to deal with their pro
s. But in the higher education and university programs of Thailand
xtension program directed from the university is not included. Ex-
ionists work under the government.

In 1956¹⁰ the Ministry of Education established the two-year
nical Agricultural College at Maejo, Chiangmai and in 1958 the Bang
Agriculture College in Chouburi. Later, other colleges of agricul-
were established at Surin, Ayudya, and Nakornsri Tammaraj. First
l universities were established in 1964 and 1965 at Chiangmai in th
1 and at Khoukaen in the northeast. Kasetsart and Chiangmai Univer
as were the only ones offering agricultural education programs for
ners of agriculture and extension workers.

For the Purpose of the Study

The author needed to point out that agricultural education in the
age of agriculture, Chiangmai University, is concerned with the

⁹ Charles E. Kellogg and David C. Knapp, The College of Agriculture
nce in the Public Service (New York, 1966), p. 3.

¹⁰ Ibid., p. 3.

of the research. This university being a new university (ten years old), numerous suggestions and new technology to develop the administration to teach the goal in education were needed. The first college consisted of six students who enrolled in 1964 and graduated in 1967.¹¹ The plan of the college was to produce manpower for agriculture and provide new ideas, new technology in instruction, material research and extension. The college has a farm of 750 acres, three miles from the university campus for students to practice farming. And through the international cooperation and assistance such as the Ford Foundation, scholarships are made available to students to further their study both within the country and abroad.

It should be noted that the university is very young and might need improvement for a bright future. It is the aim of the author to point out which needs to be improved. Education needs to be developed with modern technology and working with new knowledge. We have had some success in educational endeavors in the past year. From this research there may be suggested some things which can help work out the problems and make the great move for agricultural education in the university and the nation.

Summary

Agricultural education is highly important for an agricultural country, such as Thailand. High production in agriculture needs good workers who can use new knowledge, new techniques, and new materials.

11

Handbook of the College of Agriculture (Chiengmai, Thailand, 1970)

. good producer needs a good institute too.

According to the attitudes of students of this college, the college has some important things to be improved, such as instruction, textbooks, etc.

Most studies tend to agree that a student's attitude influences the administration of a college which in turn affects increases in material factors used in teaching and training, and this attitude also influences relationships between instructors and learners in this college throughout any field of education.

CHAPTER III

DESIGN AND METHODOLOGY

The purpose of this chapter is to describe the methods and procedures used in conducting this study. The following procedures were necessary to complete the study:

1. Write a letter for information
2. Determine the population of the study
3. Prepare and develop the questionnaire
4. Administer the questionnaire
5. Select methods of data analysis

Letter for Information

Write letters asking for information to the following sources of information:

1. College of Agriculture, Chiangmai University, Chiangmai, Thailand
 - A. Administration in the college
 - B. Curriculum and Instruction
 - C. Materials and Laboratory
 - D. Number of students and instructors
2. University Department, Office of Prime Minister, Bangkok, Thailand

The Study of Population

The population for this study consisted of 44 agricultural students enrolled at the College of Agriculture, Chiangmai University, Chiangmai

land, for the academic year of 1973-74. These 44 students were divided into two groups: 22 students in their junior year, and 22 students in their senior year.

The Preparation and Development of the Questionnaire

In formulating the statements used on the student questionnaire, the investigator considered personnel concerns and suggestions from the staff members of the Agricultural Education Department, Oklahoma State University. Statements for the questionnaire were selected from different questionnaires in other agricultural areas and were set into specific areas on the questionnaires for the specific answers of the students.

Administering the Questionnaire

The investigator chose to administer the questionnaire by sending it to his friends who work at the college of agriculture, Chiangmai University, and they, in turn, administered it to the students during February, 1974. These were returned to the investigator after two weeks.

The students responded to the statements on a one to six scale: one = no response, A = excellent, B = good, C = fair, D = poor, E = unacceptable.

All instructions were given orally by the friends of the investigator and then translated into the Thai language by the investigator.

Selecting Methods of Data Analysis

In this study the statements on the questionnaire were grouped in specific areas. The students responded from unacceptable to no response. Comparison of the findings in each area were facilitated through mean responses and numerical values which were assigned to the response scale in the following pattern:

No Response = 0

A Excellent = 5

B Good = 4

C Fair = 3

D Poor = 2

E Unacceptable = 1

Concerning the statistical analysis, the investigator used the average rating scores to evaluate the mean of rating items from the students' responses and used the "T" test statistical comparison between junior and senior groups. The 0.05 level of significance was used.

Also due to a need to determine the average response to each group of statements and because computation of these mean responses resulted in decimal fractions, a range of numerical values was established for each degree of agreement response category as follows:

	Range of Statements
Excellent	4.50 - 5.00
Good	3.50 - 4.49
Fair	2.50 - 3.49
Poor	1.50 - 2.49
Unacceptable	0.00 - 1.49

CHAPTER IV

PRESENTATION AND DATA ANALYSIS

This chapter concerns the presentation and analysis of data collected from the attitude questionnaire completed by the two groups of students at the college of agriculture, Chiangmai University (first group is the junior students; second group is the senior students).

The results of this study are presented in twelve sections. They are as follows:

1. Indicating occupational objectives
2. Undergraduate major
3. Satisfaction with selected items pertaining to instruction and courses
4. Comparison of scores regarding selected items pertaining to instruction and courses
5. Satisfaction with selected items pertaining to instructors
6. Comparison of scores regarding selected items pertaining to instructors
7. Satisfaction with selected items pertaining to texts and materials
8. Comparison of scores regarding selected items pertaining to texts and materials
9. Satisfaction with selected items pertaining to the field of training
10. Comparison of scores regarding selected items pertaining to the field of training
11. Satisfaction with selected items pertaining to the relationship between instructors and students

12. Comparison of scores regarding selected items pertaining to the relationship between instructors and students

Indicating Occupational Objectives

Table I contains the results of the students' responses to their re occupational objectives. From five areas of occupation in an cultural career, junior students and senior students gravitate to r occupation according to their own aim in life. The smallest of students' responses was to the agricultural teacher occupation with percent from both groups.

For an extension agent, there was a 22.72 percent response from groups. In the agricultural business occupation, there was a 9.0 ent response from the junior students, while the senior students' onse was 22.72 percent. Farming and ranching received a response the junior year students of 31.82 percent, while in the senior , it received a 22.72 percent response. And graduate school for iced study received the largest number of students' response with 2 percent of the junior students and 27.27 percent of the senior ents responding.

Undergraduate Major Field

Table II presents the results of the students' response as to their graduate major. This table was composed of five different majors in college. There was student response from both the junior class and the senior class with results in "animal husbandry" of 27.27 percent from the junior students and 36.36 percent from the senior students; "natural science," 40.90 percent from the junior students and 27.27 percent

DIESTRIBUTION OF STUDENT RESPONSES INDICATING
OCCUPATIONAL OBJECTIVE

Classification	Occupational Objective									
	Farming- Ranching		Agri- Business		Agri- Teacher		Graduate School		Extension Agent	
	No.	%	No.	%	No.	%	No.	%	No.	%
Junior	7	31.82	2	9.09	1	4.54	7	31.82	5	22.72
Senior	5	22.72	5	22.72	1	4.54	6	27.27	5	22.72

DISTRIBUTION OF STUDENT RESPONSES AS TO
UNDERGRADUATE MAJOR

Classification	Major									
	Animal Husbandry		Plant Science		Plant Pathology		Extension		Food Science	
	No.	%	No.	%	No.	%	No.	%	No.	%
Junior	6	27.27	9	40.90	7	31.82				
Senior	8	36.36	6	27.27	6	27.27			2	9.09

the senior students; "plant pathology," 31.82 percent among the
 or year students and 27.27 percent among those in the senior year;
 d science," 9.09 percent from the senior students and no response
 the junior year students, and there was no student response to the
 ension" major in the college.

Satisfaction with Selected Items Pertaining to Instruction and Courses

Table III presents the results of students' response as to their
 sfaction with selected items pertaining to instruction and courses
 evaluation of the data analysis received an average rating of 3.23
 he junior student group, which is in the fair level. And in the
 p of senior students an average rating of 3.41 was obtained which
 in the fair level. From this analysis there seems to be no dif-
 nce in the attitude of the students to their instruction and
 ses since they felt that both were in the middle position. For ma-
 ements there was an unacceptable rating from both groups of student
 was the case for statements two, four, six, eight, and nine.

Statement two, "organization of courses," statement four, "rele-
 e of assignments," and statement six "students' involvement," all
 ived 4.54 percent each in the unacceptable category from the junior
 ent group. But in the senior group, they accepted these statements
 Statement eight, "demonstration instruction," received the respons
 unacceptable from 9.09 percent of the students in the junior year.
 e was no percentage of an unacceptable response from the senior
 ent group.

Statement nine, "use of audio-visual aid," received an unacceptabl

TABLE III

DISTRIBUTION OF STUDENT RESPONSES AS TO THEIR SATISFACTION
WITH SELECTED ITEMS PERTAINING TO INSTRUCTION AND COURSES

Statement No. Within Table	Statement	Junior Student N = 22										Senior Student N = 22											
		Student Indicating										Student Indicating											
		Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating	Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating
		N	%	N	%	N	%	N	%	N	%		N	%	N	%	N	%	N	%	N	%	
1	Availability of Courses	3	13.63	10	45.45	9	40.90				3.72			18	81.81	4	18.18					3.82	
2	Organization of Courses			10	45.45	10	45.45			1	4.54	3.36		12	54.54	10	45.45					3.54	
3	Objective Clearly Presented	3	13.63	12	54.54	5	22.72	2	9.09		3.72			6	27.27	13	59.09	3	13.63			4.14	
4	Relevance of Assignments			8	36.36	12	54.54	1	4.54	1	4.54	3.22	2	9.09	9	40.90	9	40.90	2	9.09			3.50
5	Relationship of Lecture and Reading Assignment or Examination Question	2	9.09	8	36.36	10	45.45	2	9.09		3.45	2	9.09	9	40.90	9	40.90	2	9.09			3.50	
6	Students' Involvement	2	9.09	7	31.82	12	54.54			1	4.54	3.40	1	4.54	13	59.09	6	27.27	2	9.09			3.59
7	Control of Cheating	4	18.18	9	40.90	8	36.36	1	4.54		3.72	10	45.45	3	13.63	8	36.36	1	4.54			4.00	
8	Demonstration Instruction	1	4.54	4	18.18	13	59.09	2	9.09	2	9.09	3.00	1	4.54	6	27.27	11	50.00	4	18.18			3.18
9	Use of Audio-Visual Aid	1	4.54	1	4.54	13	59.09	6	27.27	1	4.54	2.77	1	4.54	1	4.54	10	45.45	9	40.40	1	4.54	2.63
10	Overall Instruction Evaluation	10	45.45	7	31.82	11	50.00	2	9.09	1	4.54	3.23			9	40.90	13	59.09					3.41

g of 4.54 percent for both groups of students.

Comparison of Junior and Senior Student Scores

Regarding Selected Items Pertaining to

Instruction and Courses

Table IV contains the results of the data analysis using the mathematical analysis of "T" test at a 0.05 level of significant difference. The results presented in this data show almost no significant difference in the response of the students. There can also be seen in data analysis of the average rating almost no difference in the rating. The widest range in this data is a 0.42 in the average ratings. This was obtained from statement three, "objectives clearly stated," which received an average rating of 3.72 in the junior group for the senior group an average rating of 4.14 was received. And the narrowest range, was obtained for statement five, "relation of lecture and reading assignment or exam question." Thus the conclusion of this table concerning all of the statements on instruction courses was that they fell in the fair position.

Satisfaction With Selected Items Pertaining

to Instructors

Table V presents the results of the analysis of the responses of students as to their satisfaction with selected items pertaining to instructors. An average rating score of all statements was 3.68 among the junior group, which is in the good position and 3.91 in the senior group, which is also in the good position. Thus this table would indicate that this college has good instructors because of the average

TABLE IV

COMPARISON OF JUNIOR AND SENIOR STUDENT SCORES
REGARDING SELECTED ITEMS PERTAINING
TO INSTRUCTION AND COURSES

Statement No. Within Table	Statement	Average Rating Score		"T" Value	Significance at 0.05 Level
		Junior Student	Senior Student		
1	Availability of Courses	3.72	3.82	0.353	None
2	Organization of Courses	3.36	3.54	1.641	None
3	Objective Clearly Presented	3.72	4.14	1.909	None
4	Relevance of Assignments	3.22	3.50	1.727	None
5	Relation of Lecture and Reading Assignment or Exam Question	3.45	3.50	0.208	None
6	Students' Involvement	3.40	3.59	0.791	None
7	Control of Cheating	3.72	4.00	1.000	None
8	Demonstration Instruction	3.00	3.18	0.692	None
9	Use of Audio-Visual Aids	2.77	2.63	-0.500	None
10	Overall Instruction Evaluation	3.23	3.41	0.857	None

"T" Value at 0.05 level in the Book's Table = 2.080

TABLE V

DISTRIBUTION OF STUDENT RESPONSES AS TO THEIR SATISFACTION
WITH SELECTED ITEMS PERTAINING TO INSTRUCTORS

Statement No. Within Table	Statement	Junior Student N = 22 Student Indicating										Senior Student N = 22 Student Indicating											
		Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating	Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating
		N	%	N	%	N	%	N	%	N	%		N	%	N	%	N	%	N	%	N	%	
1	Knowledge of Subject Matter	3	13.63	15	68.18	4	18.18					3.95	6	27.27	15	68.18	1	4.54					4.23
2	Mannerism	2	9.09	14	63.63	6	27.27					3.82	3	13.63	16	72.72	3	13.63					4.00
3	Self-Confidence	2	9.09	17	77.27	3	13.63					3.95	3	13.63	15	68.18	4	18.18					3.95
4	Enthusiasm in Subjects	2	9.09	10	45.45	8	36.36	2	9.09			3.55	3	13.63	14	62.63	5	22.72					3.91
5	Preparation in Subject	4	18.18	8	36.36	9	40.90	1	4.54			3.68	3	13.63	14	63.63	5	22.72					3.91
6	Stimulation of the Instructions	2	9.09	4	18.18	14	63.63	1	4.54	1	4.54	3.23	3	13.63	11	50.00	7	31.82	1	4.54			3.73
7	Control of Class and Laboratory	2	9.09	13	59.09	5	22.72	1	4.54			3.76	4	18.18	8	36.36	7	31.82	1	4.54	2	9.09	3.50
8	Fairness of Grading	4	18.18	12	54.54	5	22.72	1	4.54			3.86	10	45.45	6	27.27	6	27.27					4.18
9	Availability to Student	4	18.18	9	40.90	6	27.27	3	13.63			3.64	9	40.90	11	50.00	2	9.09					4.32
10	Overall Instructor Evaluation	3	13.63	11	50.00	6	27.27	2	9.09			3.68	1	4.54	18	81.81	3	13.63					3.91

g in the good level. The highest average rating scores among the group was given to statement nine, "availability to the student," was 4.32, while the lowest average score of 3.50 was given to statement seven, "control of class and laboratory." For the junior student, the highest average rating score of 3.95 was given to statement, "self-confidence." The lowest average rating score among the students was 2.23 for statement six, "stimulation of the instructor," which received an unacceptable rating of 4.54 percent among the students polled and statement seven, "control of class and laboratory" to which a rating of 9.09 percent was obtained from the students senior year.

Comparison of Junior and Senior Student Scores

Regarding Selected Items Pertaining to Instructors

Table VI presents the results of the analysis of the data in the significance level of the "T" test. Almost all of the statements in the presented indicate that there is no significant difference in the grade of the students from both groups. And since it can be seen that the average rating of the scores is high, it would seem that agreement between the junior and senior students as to their instructors' grading is high. But there were two statements in this data which are significantly different concerning their instructors.

Statement six, "stimulation of the instructions," received an average rating of 3.23 from the junior student group, which is in the fair

However, the senior student group had an average rating of 3.73, which is in the good level. Thus, the "T" test of the attitudes of the

TABLE VI
 COMPARISON OF JUNIOR AND SENIOR STUDENT SCORES
 REGARDING SELECTED ITEMS PERTAINING
 TO INSTRUCTORS

Statement No. Within Table	Statement	Average Rating Score		"T" Value	Significance at 0.05 Level
		Junior Student	Senior Student		
1	Knowledge of Subject Matter	3.95	4.23	1.647	None
2	Mannerism	3.82	4.00	1.058	None
3	Self-Confidence	3.95	3.95	0.000	None
4	Enthusiasm in Subjects	3.55	3.91	1.714	None
5	Preparation in Subjects	3.68	3.91	1.045	None
6	Stimulation of the Instructions	3.23	3.73	2.174	Significant
7	Control of Class and Laboratory	3.76	3.50	-0.928	None
8	Fairness of Grading	3.86	4.18	1.280	None
9	Availability to Student	3.64	4.32	2.720	Significant
10	Overall Instructor Evaluation	3.68	3.91	1.150	None

roups of students was 2.174 which is greater than 2.080 which in-
 es that there is a significant difference in the average rating
 s.

Statement nine, "availability to the student," received the "T"
 result of 2.720 which seems like a very high level of significant
 rence when compared to statement six. This statement received an
 ge rating of 3.64 from the junior student group, which is in the
 level and an average rating score of 4.32 for the senior student
 , which is also in the good level for the instructors. But the
 ts of the "T" test were still higher than the 0.05 level in the
 , thus indicating a significant difference between both groups.
 results indicate that students in the senior class respond to
 instructors better than the junior class.

Satisfaction with Selected Items Pertaining to Texts and Materials

Table VII presents the students' response regarding their satis-
 on with selected items pertaining to texts and materials in the
 room and laboratory.

Both groups of students gave a good average rating to statements
 nd three, with average rating scores in the same range from 3.50 t

However, statement four, "nature of texts (easy or difficult to
 and understand)," and statement six, "overall evaluation of texts
 aterials," indicate that both groups had different average rating
 s which fell in different positions. For the junior students,
 statements fell in the fair level, but that of the senior student
 in the good level.

TABLE VII

DISTRIBUTION OF STUDENT RESPONSES AS TO THEIR SATISFACTION
WITH SELECTED ITEMS PERTAINING TO TEXTS AND MATERIALS

Statement No. Within Table	Statement	Junior Student N = 22										Senior Student N = 22										
		Student Indicating										Student Indicating										
		Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating	Excell- ent		Good		Fair		Poor		Unaccep- table	
N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
1	Content	4	18.18	11	50.50	5	22.72	1	4.54		3.68	6	27.27	9	40.90	7	31.82					3.95
2	Availability	1	4.54	5	22.72	8	36.36	7	31.82	1	4.54	2.91		5	22.72	14	63.63	3	13.63			3.09
3	Relevance (Usefulness and Importance)	3	13.63	7	31.82	10	45.45	1	4.54		3.57	8	36.36	10	45.45	3	13.63	1	4.54			4.14
4	Nature of Texts (Easy or Difficult to Read and Understand)			5	22.72	11	50.00	6	27.27		2.95	10	45.45	10	45.45	1	4.54	1	4.54			4.32
5	Handout Materials	4	18.18	7	31.82	9	40.90	1	4.54	1	4.54	3.55	1	4.54	6	27.27	15	68.18				3.36
6	Overall Evaluation of Texts and Materials			6	27.27	15	68.18	1	4.54		3.23			11	50.00	11	50.00					3.50

Concerning statement five, "hand out materials," reverse average scores were found for both groups. The junior students' average score was 3.55 which is in the good level, with 31.82 percent of students' response in the good category, while the senior students' average rating score of 3.36, only 0.14 below the good level, with 18.18 percent of the student response in the fair rating position. As to statement two, "availability," both groups of students gave a rating with similar averages which indicated no difference between groups concerning this statement. The junior students gave it an average rating of 2.91 with 36.36 percent in the fair rating level, while the senior students gave it an average rating of 3.09, with 63.63 percent of them also in the fair rating level.

Comparison of Junior and Senior Student Scores

Regarding Selected Items Pertaining to

Texts and Materials

Table VIII contains the results of the "T" test which compared the significant difference between junior students' and senior students' responses to selected items pertaining to texts and materials. Calculation results show a significant difference for statement three, "relevance (usefulness and importance)," with an average rating score of 3.57 for the junior student group and a 4.14 average rating score for the senior students.

As to statement four, "nature of texts (easy or difficult to read and understand)," the junior students gave an average rating of 2.95, with the average rating from the senior student group. However, there was no significant difference between junior students and senior student

TABLE VIII

COMPARISON OF JUNIOR AND SENIOR STUDENT SCORES
REGARDING SELECTED ITEMS PERTAINING
TO TEXTS AND MATERIALS

Statement No. Within Table	Statement	Average Rating Score		"T" Value	Significance at 0.05 Level
		Junior Student	Senior Student		
1	Content	3.68	3.95	0.931	None
2	Availability	2.91	3.09	0.750	None
3	Relevance (Usefulness and Importance)	3.57	4.14	2.375	Significant
4	Nature of Texts (easy or difficult to read and understand)	2.95	4.32	5.956	Significant
5	Handout Materials	3.55	3.36	-0.792	None
6	Overall Evaluation of Texts and Materials	3.23	3.50	1.688	None

ing statement one, "content," which produced an average rating from the junior students of 3.68 and 3.95 from the senior student group. Statement two, "availability," received from both groups an average rating in the fair level with a rating of 2.91 from the junior student and a 3.09 average rating from the senior student group. Statement five, "hand out materials," received an average rating of 3.36 from the junior students which is in the good level, while an average rating of 3.36 was obtained from the senior student group, which is in the fair level. Yet, there was no significant difference between the two groups because only 0.06 of the junior student group above responded with a good rating. The response to statement six, "overall evaluation of texts and materials," resulted in no significant difference between the two groups with an average rating of 3.23 from the junior student group, which is in the fair level, while the senior students had an average rating of 3.50, which is in the good level.

Satisfaction with Selected Items Pertaining to the Field of Training

Table IX presents the results of the students' response as to their satisfaction with selected items pertaining to their training in their field. Almost all of the average rating scores from the two groups were in the good level; such was the case for statements two, four, and six among the junior student group, while the senior student group gave a good average rating to statements one, two, four, and six. Both groups of students gave a good rating to statement two, "use of the experience," and statement four, "training related to the

TABLE IX

DISTRIBUTION OF STUDENT RESPONSES AS TO THEIR SATISFACTION
WITH SELECTED ITEMS PERTAINING TO SPECIFIED
FIELD OF TRAINING

Statement No. Within Table	Statement	Junior Student N = 22 Student Indicating										Senior Student N = 22 Student Indicating											
		Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating	Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating
		N	%	N	%	N	%	N	%	N	%		N	%	N	%	N	%	N	%	N	%	
1	Availability	3	13.63	7	31.82	9	40.90	3	13.63		3.45	4	18.18	13	59.09	5	22.72					3.95	
2	Useful for the Experience	5	22.72	7	31.82	9	40.90	1	4.54		3.73	5	22.72	12	54.54	5	22.72					4.00	
3	Organization of Training	1	4.54	12	54.54	9	40.90				3.63	14	63.63	7	31.82					1	4.54	4.50	
4	Training Related to the Major Field	4	18.18	8	36.36	9	40.90	1	4.54		3.68	5	22.72	14	63.63	3	13.63					4.09	
5	Field Trip	2	9.09	4	18.18	14	63.63	2	9.09		3.27	2	9.09	6	27.27	9	40.90	5	22.72			3.23	
6	Overall Training Evaluation	1	4.54	9	40.90	11	50.00	1	4.54		3.45	1	4.54	10	45.45	11	50.00					3.55	

field," thus indicating no difference between the groups concerning these statements. However, an average rating was obtained from both groups to statement five, "field trip," to which the junior student group gave an average rating of 3.27 with a 63.63 percent student response to this statement, while an average rating of 3.23 was received from the senior students with 40.90 percent of them responding to this statement. The result of both groups was in the fair level. But there was a difference between the groups concerning statements one, three, and six.

Statement one, "availability," received a fair average rating of 3.27 from the junior student group with 40.90 percent of the students giving this statement a fair rating while the senior students gave it an average rating of 3.95 with 59.09 percent of them responding in a fair manner.

To statement three, "organization of training," the junior student group responded with an average rating of 3.63, which is in the good level with a 54.54 percent student response to this statement, while an average rating of 4.50 was obtained from the senior student group, which is in the excellent level, with a 63.63 percent student response. But only 10 percent of the students gave an unacceptable response to this statement.

For statement six, "overall training evaluation," the junior student group had an average rating of 3.45, which is in the fair level, with 50 percent of the students responding to this statement, while the senior student group had an average rating of 3.55, which is in the good level, with a 45.45 percent student response which was only 0.06 above the fair level.

Comparison of Junior and Senior Student Scores
Regarding Selected Items Pertaining to
the Field of Training

Table X contains the results of the data analysis of the "T" test students' responses concerning their satisfaction with selected items pertaining to the field of training. As in the table, most of the results of the "T" test show no significant difference between junior and senior student responses. Such is the case for statements one, two, three, five, and six.

Although there was a difference in the student responses, the results for statements had an average rating nearly to the range of statement re- sponse categories. For example, to statement one, there was only a slight departure from an average rating score for the junior student group which is below the point of the separation level; such was the case for statement six also. But statements two, four, and five all fell in the excellent range of level and thus did not indicate any significant difference. However, response to statement three, "organization of training," did indicate a significant difference between both groups. For the junior students an average rating of 3.63 was obtained which is in the excellent level, while the senior student group had an average rating of 4.5, which is in the excellent level. With a "T" test result of 3.78% we can thus see the significant difference between both average ratings, particularly when compared to the 2.080 at the 0.05 level in the table.

TABLE X

COMPARISON OF JUNIOR AND SENIOR STUDENT SCORES
REGARDING SELECTED ITEMS PERTAINING
TO SPECIFIC FIELD OF TRAINING

Statement No. Within Table	Statement	Average Rating Score		"t" Value	Significance at 0.05 Level
		Junior Student	Senior Student		
1	Availability	3.45	3.95	1.666	None
2	Useful for Experience	3.73	4.00	1.125	None
3	Organization of Training	3.63	4.50	3.782	Significant
4	Training Related to the Major Field	3.68	4.09	1.864	None
5	Field Trip	3.27	3.23	-0.100	None
6	Overall Training Evaluation	3.45	3.55	0.526	None

Satisfaction with Selected Items Pertaining
to the Relationship Between Instructors
and Students

Table XI presents the students' responses as to their satisfaction selected items pertaining to the relationship between instructors and students. The junior student group had an average rating over 3.50 is in the good level, for statements one, two, and three; to statements four, five, six, seven, and eight, they gave an average rating 3.50 which is in the fair level. However, the senior student had average rating scores over 3.50 in all of these statements, places them in the good position. For statements one, two, and three, there was an average rating from both groups which was in the good level. To statement one, "friendliness," the junior student group gave an average rating of 3.63, with a 27.27 percent student response, while the senior student gave an average rating of 3.82 was obtained from the senior student group, with 50.00 percent of the students responding to this statement. There was also an unacceptable 4.54 percent student response to this statement.

Statement two, "fairness," received an average rating of 3.72 from the junior students, with 68.18 percent of them responding to this statement while there was an average rating of 4.18 with a 54.54 percent student response to this statement from the senior student group.

Statement three, "honesty," was given an average rating of 4.00 by the junior student group, with a 59.09 percent student response to this statement, while the senior students gave it an average rating of 4.00 with 59.09 percent of them responding to this statement.

TABLE XI

DISTRIBUTION OF STUDENT RESPONSES AS TO THEIR SATISFACTION
WITH SELECTED ITEMS PERTAINING TO THE RELATIONSHIP
BETWEEN INSTRUCTORS AND LEARNERS

Statement No. Within Table	Statement	Junior Student N = 22										Senior Student N = 22											
		Student Indicating										Student Indicating											
		Excell- ent		Good		Fair		Poor		Unaccep- table		Average Rating		Excell- ent		Good		Fair		Poor		Unaccep- table	
N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	Friendliness	6	27.27	6	27.27	6	27.27	4	18.18		3.63	6	27.27	11	50.00	3	13.63			1	4.54		3.82
2	Fairness	1	4.54	15	68.18	5	22.72	1	4.54		3.72	7	31.82	12	54.54	3	13.63						4.18
3	Honesty	5	22.72	13	59.09	3	13.63	1	4.54		4.00	6	27.27	13	59.09	3	13.63						4.14
4	Approachability	1	4.54	4	18.18	15	68.18	2	9.09		3.18	4	18.18	11	50.00	6	27.27	1	4.54				3.81
5	Helpfulness	2	9.09	7	31.82	11	50.00	2	9.09		3.41	7	31.82	9	40.09	6	27.27						4.05
6	Communication	1	4.54	4	18.18	13	59.09	4	18.18		3.09	4	18.18	12	54.54	6	27.27						3.91
7	Respect	2	9.09	6	27.27	10	45.54	4	18.18		3.27	7	31.82	11	50.00	4	18.18						4.14
8	Overall Relationship Between Instructors and Learners	1	4.54	7	31.82	12	54.54	2	9.09		3.32	4	18.18	14	63.63	4	18.18						4.00

Concerning statement four, "approachability," the junior student had an average rating of 3.18, which is in the fair level, with percent of them responding, while the senior student gave this ment an average rating of 3.81 which is in the good level, with 00 percent student response.

Statement five, "helpfulness," received an average rating of 3.41 50.00 percent of the students responding from the junior year; the r student group had an average rating of 4.05, with a 40.09 percent response.

Statement six, "communication," was given an average rating of 3.0 a 59.09 percent response from the junior students; senior students nse was 54.54 percent, with an average rating of 3.91. To state-seven, "respect," an average rating of 3.27 was received with 45.4 nt of the junior students responding, while the senior students it an average rating of 3.91, with 54.54 percent student response.

Statement eight, "overall relationship between instructors and stu ," received an average rating of 3.32 from the junior student , with a 54.54 percent student response, while the senior students it an average rating of 4.00, with 63.63 percent of them respondin is notable about these statements is that for both groups they in different levels; the junior student group responded to these ments in the fair level, while the senior student response was ex- vely in the good level.

Comparison of Junior and Senior Student Scores

Regarding Selected Items Pertaining

to the Relationship Between

Instructors and Students

Table XII contains the results of the data analysis with regard to statistical "T" test, comparing the attitude of junior students and students in their relationship with their instructors at a 0.05 level of significance. With the exception of statements one and three, the statements registered some degree of significant difference. Statement one, "friendliness," had the result of 0.403 which is greater than 2.080 at a 0.05 level with an average rating of 3.63 from junior students and a 3.82 from the senior students, thus indicating significant difference between the two groups of students.

Statement three, "honesty," was given an average rating of 4.00 from the junior student group and a 4.18 from the senior students with a test value of 0.666 which is smaller than 2.080 at a 0.05 level and likewise indicates no significant difference in the attitude of both groups of students.

Concerning statements two, four, five, six, seven, and eight, all these statements had a significant degree of difference from both groups with the calculated value greater than the "T" test value in the table (2.080) at a 0.05 level.

Statement two, "fairness," had a "T" value of 2.300, with an average rating of 3.72 from the junior students, while the senior students had an average rating of 4.18.

Statement four, approachability," received an average rating of

TABLE XII

COMPARISON OF JUNIOR AND SENIOR STUDENT SCORES
REGARDING SELECTED ITEMS PERTAINING TO
RELATIONSHIP BETWEEN INSTRUCTORS
AND LEARNERS

Statement No. Within Table	Statement	Average Rating Score		"T" Value	Significance at 0.05 Level
		Junior Student	Senior Student		
1	Friendliness	3.63	3.82	0.463	None
2	Fairness	3.72	4.18	2.300	Significant
3	Honesty	4.00	4.14	0.666	None
4	Approachability	3.18	3.81	2.864	Significant
5	Helpfulness	3.41	4.05	2.666	Significant
6	Communication	3.09	3.91	3.727	Significant
7	Respect	3.27	4.14	3.625	Significant
8	Overall Relationship Between Instructors and Learners	3.32	4.00	3.400	Significant

from the junior student group and a 3.81 from the senior student group, with a "T" value of 2.864.

Statement five, "helpfulness," was given an average rating of 3.41 from the junior students and a 4.05 from the senior students, with a "T" value of 2.666.

To statement six, "communication," the junior student group gave an average rating of 3.09, while it was given an average rating of 3.91 by the senior student group, with a "T" value of 3.727.

To statement seven, "respect," the junior students gave an average rating of 3.27, while the senior students gave it an average rating of 3.625, with a "T" value of 3.625.

Statement eight, "overall relationship between instructors and students," was given an average rating of 3.32 by the junior students, while the senior student group gave it an average rating of 4.00, with a "T" value of 3.400.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purpose of the Study

The purpose of this study was to investigate students' attitudes toward higher education in agriculture at the college of agriculture, Chiangmai University:

The objectives of the study were as follows:

- . To discover if a significant difference existed among students who, upon graduation from the college of agriculture, will pursue five different types of occupations, namely: farming and ranching, agricultural business, agricultural teacher, graduate school, extension agent.
- . To determine if a significant difference existed in the interest levels and values held in higher education in agriculture by the five different major fields.
- . To determine if a significant difference existed in the interest levels and values held regarding higher education in agriculture by junior students as compared to senior students at Chiangmai University.
- . To investigate the relationship between the students in the junior and senior years and their instructors.

Summary

A 52-statement attitude questionnaire was administered to junior senior agricultural students in 1973-1974. The statement scales designed to cover attitudes of the student toward agricultural education at the college of agriculture, Chiangmai University.

The students responded to the statements according to a Likert-scale as a means of determining the extent to which the students agreed with the statements on the questionnaire. And the conductor used a "T" test for determining the significant level students' response level ($T = 2.080$).

There were two groups of the students--22 students from the junior year and another 22 students from the senior year.

The result of analysis of the data is presented and discussed in Chapter IV. Tables were set up in order that the students' response to the attitude questionnaire could be categorized into certain selected items of the college of agriculture, Chiangmai University. They were designed so that a comparison could be made between those students who studied in the third year and those students who studied in the fourth year in the college.

The findings, according to the selected items obtained in this study are summarized as follows:

- I. Indicating Occupational Objectives, it was indicated that
 - a. Both groups selected the farming and ranching when compared to other occupations.
 - b. Professions on agricultural-business were less preferable among the junior students than those among senior students

- c. As far as professions in agricultural teaching, both groups were at the same low percentage.
 - d. Both groups were at the same high percentage of their preference concerning extension agent occupation.
- I. According to the undergraduate major
- a. Most of those two groups are majoring in animal husbandry.
 - b. Among junior students, however, there are more students majoring in plant science than seniors.
 - c. A large number of students in both groups majored in plant pathology.
 - d. Very few among these two groups majored in the extension field.
 - e. Few senior students and none of the juniors majored in food science in this survey.
- I. In regard to student satisfaction with selected items pertaining to instruction and courses, it was indicated that
- a. Average rating scores of both groups were at a good level concerning availability of courses.
 - b. Senior student group expressed that organization of course was at a good level, but junior students felt that the organization of courses should be improved.
 - c. Both groups felt that objectives of instruction were clearly presented.
 - d. Senior student felt that the relevance of assignments was good enough, while junior students felt that they needed the development.
 - e. Senior students felt that the relationship of lecture and

reading assignments or exam questions was good, while junior students felt that they needed improvement.

- f. Senior students felt that students' involvement in class was at a good level, while junior students' response was at an excellent level.
- g. Average rating scores of both groups were at a good level concerning control of cheating.
- h. Both groups felt that demonstration instruction was inadequate.
- i. Both groups felt that audio-visual aids were inadequate.
- j. Both groups felt that overall instruction should be improved.

Comparison of junior and senior student scores regarding selected items pertaining to instruction and courses indicated that, in this data analysis by the "T" test with the level of significance at 0.05 level and T value at 2.080, there was no significant difference in all statements. Analysis by "T" test showed that, with the student response to all statements at the same attitudes, the calculated value was lower than table value.

In regard to student response as to their satisfaction with selected items pertaining to instructors, it was indicated that

- a. Both groups felt that knowledge of subject matter of instructors was good.
- b. Both groups felt that the mannerisms of instructors were good.
- c. Both groups felt that self-confidence of the instructors was at the same average rating scores.

- d. Both groups felt that the enthusiasm in subject of instructor was good enough.
 - e. Average rating scores of both groups were at a good level concerning preparation in subject of instructors.
 - f. Senior students felt that the stimulation of the instructions was adequate, while junior students felt that they were inadequate.
 - g. Both groups felt that the control class and laboratory of the instructor were good enough.
 - h. Average rating scores of both groups were at a good level concerning the fairness of grading.
 - i. Both groups felt that the availability to students was adequate.
 - j. Both groups felt that overall instructor evaluation was good.
- . Comparison of junior and senior student scores regarding selected items pertaining to instructors, it was indicated that: Concerning statement one, "knowledge of subject matter," statement two, "mannerism," statement three, "self-confidence," statement four, "enthusiasm in subjects," statement five, "preparation of subjects," statement seven, "control of class and laboratory," statement eight, "fairness of grading," statement ten, "overall instructor evaluation," all of these statements were not significantly different between junior and senior students, while statement six, "stimulation of the instructions," and statement nine, "availability to student," were significantly different between junior and senior students

attitudes at the 0.05 level of significant difference.

- . In regard to student response as to their satisfaction with selected items pertaining to texts and materials, it was indicated that
 - a. Both groups felt that the content of the texts was at a good level.
 - b. Average rating scores of both groups were at the fair level concerning the availability of texts and materials.
 - c. Both groups felt that relevance (usefulness and importance) of the texts and materials was at a good level.
 - d. Senior students felt that the nature of texts (ease to read and understand) was good enough, while junior students felt that it rated a fair level (difficult to read and understand).
 - e. Senior students felt that the handout materials in class were inadequate, while junior students felt that they were adequate.
 - f. Senior students felt that overall evaluation of texts and materials were adequate, while junior students felt they were inadequate.
- . Comparison of junior and senior student scores regarding selected items pertaining to texts and materials, it was indicated that: Concerning statement one, "content," statement two, "availability," statement five, "handout materials," and statement six, "overall evaluation of texts and materials," all of these statements were not significantly different when compared with the attitudes of the students, while statement three

"relevance (usefulness and importance)," and statement four, "nature of texts (easy or difficult to read and understand)," these two statements were significantly different in the comparison of students' attitudes at the 0.05 level of significant difference of the "T" test.

In regard to student responses as to their satisfaction with selected items pertaining to specified field of training, it was indicated that

- a. Senior student average rating scores were good level concerning the availability of training, while junior students felt that they were inadequate.
- b. Both groups felt that the usefulness of training for their experience was good enough.
- c. Senior students felt that the organization of training was very good (excellent level), while junior students thought they were good but needed development.
- d. Both groups agree that the training related to the major field.
- e. Both groups felt that the field trip was inadequate.
- f. Senior students felt that the overall training was good enough, while junior students felt that they should be developed.

Comparison of junior and senior student scores regarding selected items pertaining to specified field of training, it was indicated that: To statement one, "availability," statement two, "useful for experience," statement four, "training related to the major field," statement five, "field trip," and statement

six, "overall training evaluation," all of these statements were not significantly different in the students' attitudes in both groups. But in statement three, "organization of training," this statement was significantly different when comparing the attitudes of the students of the two groups.

In regard to student response as to their satisfaction with selected items pertaining to the relationship between instructors and learners, it was indicated that

- a. Average rating scores of both groups were at a good level concerning the friendliness of the instructors and learners.
- b. Both groups felt that the fairness was good.
- c. Both groups felt that the honesty between instructors and learners was good enough.
- d. Senior students felt that the approachability was good, while junior students felt that it was not good enough.
- e. Senior students felt that the helpfulness was adequate, while junior students felt it was inadequate.
- f. Senior students average rating scores were at a good level, while junior students felt that the communication was inadequate.
- g. Senior students felt that the respect between instructors and learners was good, while junior students needed the development in this area.
- h. Senior students agreed that the overall relationship between instructors and learners was good, but junior students disagreed. They felt it should be improved.

Comparison of junior and senior student scores regarding

selected items pertaining to relationship between instructors and learners indicated that: Concerning statement one, "friendliness," and statement three, "honesty," these statements were not significantly different when comparing the attitudes from both groups of the students. To statement two, "fairness," statement four, "approachability," statement five, "helpfulness," statement six, "communication," statement seven, "respect," and statement eight, "overall relationship between instructors and learners," all of these statements were significantly different in comparison with the students' attitudes in junior and senior students in their relationship with their instructors.

Conclusion

Based upon analysis of data collected and presented in this study, the following conclusions can be suggested about the attitudes of the students in the instructional program in agriculture at the College of Agriculture, Chiangmai University. Major conclusions reached according to the various areas investigated in this study are presented as follows:

Occupational Objectives

- a. Farming and ranching receiving a high response choice from students along with extension work would seem to indicate that the country may increase production and gain benefit from this direction of manpower.
- b. Since many chose to pursue advanced study, instructors should devote themselves to providing the most profitable

programs for students to study both within the country and abroad.

Undergraduate Major

- a. Concentration of counseling activities for the student according to the areas of indicated strong interest--animal husbandry, plant science, plant pathology, which are the most popular choice for the student--should be considered so that the college could better serve student desires and needs. They should also plan for more room and facilities in these areas.
- b. There should be encouragement for the student to study in the important major fields of extension and food.

IV. Instruction and Courses

- a. The College can profit from giving attention to further development of the instructional process, especially with emphasis on the quality of instruction through demonstrations.
- b. There should be an attempt made to have improved relevance of assignments.
- c. Additional audio-visual aids are needed to accomplish more effective teaching in the classes.

VI. Instructors

- a. Instructors of the College need to give much attention to the stimulation of the instruction.
- b. Students, especially juniors, could be helped if more attention is given to continued availability of the instructors.

- VIII. Texts and Materials

- a. The college should increase large amount of texts and materials.
- b. As indicated by the students, texts which the student can read and understand easily should be the main concern.

X - X. Specific Field of Training

- a. Training for experience is greatly needed.
- b. Organization of training should be improved.

- XII. Relationship Between Instructors and Students

- a. The relationship of the instructor and senior student is close and cordial.
- b. Relationship between junior students and their instructors is good but needs to be improved.

It was evident to the author that both groups of students had similar feelings toward agricultural studies at the College of Agriculture, in general, can be considered good. However, some differences do exist as indicated. Junior students were, in fact, generally dissatisfied than were senior students. The investigator would that, as the study is shared with teachers and administrators at gmai University, the result might be added improvement in the instructional program effectiveness.

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APPENDIX

Survey of the Students' Attitude Toward Higher
Education in Agriculture in College of Agriculture
Chiangmai University, Chiangmai, Thailand

Through this survey, the conductor hopes to obtain the information concerning Chiangmai University Agriculture students' attitudes toward teachers, instructors, texts, training, and the relationship between instructors and learners. The result of the survey should reflect the present status of the agriculture education in the higher learning institution of the country. The conductor hopes the result of the survey will give lights to concerned individuals who may hope to work on the modification and improvement of the Agricultural Education in Thailand. The conductor will be grateful for your full cooperation in providing your true own ideas with no reservation.

Items of Rating in the Surveying:

Leave Blank	=	No Response
A	=	Excellent
B	=	Good
C	=	Fair
D	=	Poor
E	=	Unacceptable

Student (Circle)

- | | |
|----------------------|------------------------------------|
| 1. My classification | A. Jr. B. Sr. |
| 2. My objective | A. Farming and Ranching |
| | B. Agri Business |
| | C. Agri Teacher |
| | D. Grad. School |
| | E. Extension Agent |

3. My major field
- A. Animal Husbandry
 - B. Plant Science
 - C. Plant Pathology
 - D. Extension
 - E. Food Science

Instructions and Courses (Fill the blank with A,B,C,D,E).

- _____ 1. Availability of Courses
- _____ 2. Organization of Courses
- _____ 3. Objective clearly presented
- _____ 4. Relevance of Assignments
- _____ 5. Relation of Lecture and Reading assignment to Exam Questions
- _____ 6. Students' Involvement
- _____ 7. Control of Cheating
- _____ 8. Demonstration Instruction
- _____ 9. Use of Audio-Visual Aids
- _____ 10. Over all Instruction Evaluation

Instructors (Fill the blank).

- _____ 1. Knowledge of Subject Matter
- _____ 2. Mannerism
- _____ 3. Self-Confidence
- _____ 4. Enthusiasm in Subjects
- _____ 5. Preparation in Subjects
- _____ 6. Stimulation of the Instructions
- _____ 7. Control of Class and Laboratory
- _____ 8. Fairness of Grading
- _____ 9. Availability to Student
- _____ 10. Over all Instructor Evaluation

Texts and Materials (Fill the Blank)

- _____ 1. Content
- _____ 2. Availability
- _____ 3. Relevance (Usefulness and Importance)
- _____ 4. Nature of Texts (Easy or difficult to read and understand)
- _____ 5. Hand out materials
- _____ 6. Over all evaluation of texts and materials

Training

- _____ 1. Availability
- _____ 2. Useful for the experience
- _____ 3. Organization of training
- _____ 4. Training related to the major field
- _____ 5. Field trips
- _____ 6. Over all training evaluation

Relationship between Instructors and Learners

- _____ 1. Friendliness
- _____ 2. Fairness
- _____ 3. Honesty
- _____ 4. Approachability
- _____ 5. Helpfulness
- _____ 6. Communication
- _____ 7. Respect
- _____ 8. Over all relationship between instructors and learners

Pongsak Angkasith

Dept. of Agricultural Education

Oklahoma State University

VITA

Pongsak Angkasith

Candidate for the Degree of

Master of Science

ort: ATTITUDES OF THE STUDENTS TOWARD AGRICULTURAL EDUCATION IN
HIGHER EDUCATION IN THE COLLEGE OF AGRICULTURE, CHIENGMAI
UNIVERSITY, CHIENGMAI, THAILAND

or Field: Agricultural Education

raphical:

Personal Data: Born in Pasang, Lamphoon, Thailand, October 28,
1948, the son of Thawon and Mungdee Angkasith.

Education: Attended high school at Prince Royal's College in
Chiengmai, Thailand; received the Bachelor of Science degree
from Chiengmai University in March 31, 1972, with a major in
Animal Husbandry; completed requirements for the Master of
Science degree at Oklahoma State University in December, 197

Professional Experience: Employed as an Assistant Manager at the
Dairy Barn Section, Thai-German Dairy Project, Huaykeow
Chiengmai, Thailand from May 1972-June 1973.

Activity Leader: Head of Agricultural Extension Division of Volu
teer Club, Chiengmai University 1970-71. President of World
University Service, Chiengmai University 1972-73. President
of Prince Royal's College Alumni, 1972-73. President of the
Thai Student Association, Oklahoma State University, 1974-75

Organizations: World University Service. Thai Student Associati