Summary Of

Royal Thai Government

and

United States Operations Mission

Cooperative Efforts

in

Development of Vocational Education

1953 - 1973

FOREWORD

The Development Assistance Group for Thailand Working Group, Vocational, Technical Industrial and Agricultural Education, at their first meeting held on 13 November 1973 requested reports from DAGT members on their cooperative efforts with their Thai colleagues in projects designed to improve vocational education in Thailand. This report presents the following:

1. Summary of USOM Cooperation, 1953-1973.
2. List of major reports on file on Vocational Education Projects.
3. List of scholarships provided in vocational education, 1965-1972. Full list is available in Directory of USOM Participants, September 1951 - February 1965.
4. List of instructional materials prepared under recent projects.

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SUMMARY OF

Assistance Provided in Development of Vocational, Technical and Agricultural Education in Thailand 1953 - 1973

The United States Operations Mission to Thailand

The task that has faced the Thai-American efforts in providing relevant skill training for the young people of the Kingdom has been an ever changing one. As the economy developed, the training needs changed accordingly. These changes were more pronounced in the urban areas than in the rural villages and as a consequence the urban based training became more complicated and formalized. This resulted in increasingly higher age groups being admitted to the more advanced training programs.

In the early 1920's and into the 1930's, carpentry and agriculture were considered appropriate occupational subjects to be taught to twelve-year old children in the fifth grade. After World War II, occupational training was moved in the "primary extension" schools at grades 5, 6 and 7 for children who could not get into what was then considered the lower secondary school (a parallel, more academic stream also at grades 5, 6 and 7). The skill training stream was commonly referred to as the "Carpentry Schools". USOM's support to vocational education in Thailand reflects the changes that have taken place in the structure of the school system and the needs for training required by the new developments in the agricultural, commercial and industrial sectors.

Starting in 1952, U.S. assistance to vocational education was focused on three major areas: (1) practical training in the "primary extension" schools which was designed to make the youngsters, who could not get into the lower secondary schools, more employable upon completion of grade 7; (2) improved technical and commercial education at Bangkok Technical Institute, which at that time was conducted at grades 11, 12 and 13; and (3) vocational agriculture education at Surin and Mae Joh (Chiang Mai) schools.

Direct hire U.S. Government vocational education technicians in the various trades and agricultural areas arrived in Thailand in 1953. In December 1956 a contract was negotiated with Wayne State University to provide additional technical assistance to Bangkok Technical Institute as well as to the newly established technical institutes at Chiang Mai, Korat and Songkhla. This was the first of a series of AID sponsored institutional contracts through which U.S. contract employees assisted the AID direct hire technicians supply the necessary technical assistance to support vocational/technical and agricultural education in Thailand. The contracts are listed below.

Wayne State University

The Wayne State University/Technical Institute Contract was signed by representatives of the governments of Thailand and the United States and the institutions concerned on November 25, 1956. The first members of the contract team arrived in Bangkok on December 5, 1956.

The original contract provided for assistance from November 25, 1956 through November 24, 1959, and included provision for 27 man-years of technical assistance and 30 man-years of participant training. In 1958, a 10-month extension was processed, bringing the contract termination date to September 30, 1960. The total funding amounted to $852,800 and the Baht equivalent of $235,000 in local currency.

Assistance was given to the Bangkok Technical Institute, the Southern Technical Institute (Songkhla), the Northeastern Technical Institute (Korat) and the Northern Technical Institute (Chiengmai).

Staff

Area	Tour in Thailand
Chief of Party	December 5, 1956 - September 30, 1960
Auto Mechanics	December 5, 1956 - July 19, 1959
Business Education	December 5, 1956 - September 30, 1960
Electricity	December 5, 1956 - September 30, 1960
Home Economics	December 5, 1956 - September 30, 1960
Industrial Arts	December 5, 1956 - September 30, 1960
Mathematics and Science	November 10, 1958 - September 30, 1960
Metal Trades	December 5, 1956 - September 30, 1960
Printing	September 8, 1957 - June 19, 1959

SEATO Skilled Labor Project

University of Hawaii Contract

From 1959 to 1965, a contract with the University of Hawaii provided assistance to the Department of Vocational Education in establishing trade training programs in six basic trades at twenty of the existing trade schools. Training in these schools was being up-graded to the 11-12-13 year level. These contract services were funded under a USOM project which was classified as a part of the U.S. contribution to SEATO, and which was therefore entitled the SEATO Skilled Manpower Project.

In addition to the 20 trade schools in the rural areas of Thailand, a vocational teacher education program was established at Thewes Vocational Teachers College in Bangkok to train shop teachers for the up-country schools.

Training was offered in six trades:

1. Auto Mechanics and Diesel
2. Welding and Sheet Metal
3. Machine Shop
4. Building Construction
5. Basic Industrial Electricity
6. Radio Repair.

There were ten full-time technical advisors involved in this project for a total of about 35 man years. The areas of concentration for the Contract Specialists were:-

1. Chief of Party - Advisor to the Director General of Vocational Education.
2. Equipment Procurement and Building Specialist.
3. Vocational Teacher Education Specialist.
4. Building Construction Training Specialist.
5. Welding and Sheet Metal Training Specialist.
6. Automotive and Diesel Mechanics Specialist.
7. Machine Shop Training Specialist.
8. Basic Electricity Training Specialist.
9. Radio Training Specialist.
10. Apprenticeship Training and Training in Industry Specialist. (Later changed to Guidance)

The chief function of this staff was to develop a Thai counterpart staff to carry on the vocational program after termination of the Contract.

Provisions were made in the contract for sending participants to the United States for training. There were 27 participants who were trained abroad. One earned a BS degree and the other 26 had six months training at the University of Hawaii.

The total cost of the project in dollars was $1,835,000 from the U.S.G. and the Baht equivalent of $900,000 from the R.T.G.

Development of Maintenance and Supply Division

Beginning in 1963, USOM assisted the Department of Vocational Education in the development of a Maintenance and Supply Division which would serve all vocational schools in the Kingdom. Also in 1963, USOM began procuring from U.S. excess property sources a number of bulldozers, road graders, trucks, tractors and the like. These were distributed to vocational agriculture schools for use in clearing land, improving the land contour, improving access roads, and performing routine farm improvement tasks.

Long-term technical assistance was provided through personal services contractors and American direct hire technicians. These advisors provided about 10 man-years of assistance in:

a. Organization and management of the operations of MSD.

b. Training a Thai staff of 75 specialists.

c. Served as USOM representatives in receiving and disbursing the dollar commodities which were used in this development activity.

d. Advised in establishing a warehouse inventory procedure for spare parts.

e. Served as USOM representatives in disbursing U.S. supplied heavy equipment.

f. Advised in establishing an inventory of all shop equipment in vocational schools supporting ARD training.

During November and December of 1965, thru a Participating Agency Service Agreement, supply and inventory specialists from the U.S. Army Logistical Center in Japan, were assigned to the MSD for 30 days. These men were requested for the purpose of improving Thai supply/warehouse personnel capabilities in procurement, record-keeping, inventory and supply procedures.

During the early months of 1966, sound systems for stock record control and inventory procedures were developed. A stock record form, in English and Thai, was designed, and 10,000 copies were printed and put into use. Requisition forms were also designed, and a requisition register and cost register placed in use.

The MSD was particularly effective in providing logistical support to the LIVE Project schools during heavy procurement and distribution schedule from 1967 to 1973.

Technical Training for Accelerated Development

In 1964, in recognition of the growing threat to Thailand's security caused by social unrest and insurgency, USOM/Thailand reassessed its participation in RTG programs. As a result of this reassessment, an Office of Rural Affairs was created within USOM to assist the new RTG Office of Accelerated Rural Development (ARD). A major goal of ARD was to open up remote areas of Northeastern Thailand by constructing new roads. Equipment for this road construction became a major commodity item in the USOM program and the training of skilled operators, machanics and allied construction workers became a major requirement.

Seeking a means of training operators and mechanics before the arrival of the ARS heavy construction equipment, USOM turned to the Department of Vocational Education, Ministry of Education and asked to use the tractors, trucks, and bulldozers that had been provided for the vocational agriculture schools during the preceding year. Permission was granted, and training was begun at the schools to which the equipment had already been delivered. The training project which was assigned to the Education Division in August of 1965, was originally titled Thai Training for ARD. It was later renamed Technical Training for Accelerated Development (TTAD), when training was made available to other RTG agencies as well as ARD. The U.S. input was approximately $4.4 million for personnel, participants and commodities.

Advisory serviced were provided by USOM direct hire personnel, a contract with Philco-Ford Corporation and the services of the U.S. Army Engineering Control and Advisory Detachment (ECAD). The training was provided at Northeast Technical Institute (NETI) at Korat and field training was provided at four different TTAD Centers.

The aims of the TTAD Program were twofold:

1. To train Engineering Technicians, Heavy Equipment Mechanics and Operators, and Construction Management and Shop Administrators for the TTAD Program. This was done with the cooperation of the Ministry of Interior in the ARD Changwad, Mobile Development Unit, Community Development Department and Land Development Department.

2. To train competent instructors in the foregoing fields for the TTAD Training Centers and for agriculture schools under the Loan for Improvement of Vocational Education Project.

A list of the various TTAD courses follows:

1. Engineering Technology. Includes Soils, Concrete, Roads and Airfields, Bridges, Dams, Irrigation, Water, Sanitation.
2. Surveying
3. Drafting
4. Building
5. Construction Foreman (Up-grading) (3 months)
6. Construction Clerk
7. Engineering Instructor
8. Heavy Equipment Operator
9. Heavy Equipment Mechanic
10. Shop Administrator/Storekeeper
11. Mechanic Theory (3 months)
12. Heavy Equipment Instructor

Except where noted, the duration of these courses was six (6) months.

Philco-Ford Corporation Contract

The Philco-Ford Contract covered the period September 1966 through June 1968. Technical services provided by Philco-Ford included as many as 31 specialists at one time. In order to get broad coverage, many of the specialists were on a short-term assignment. For example in 1966, the Philco-Ford Report showed that the number of instructors present were as follows:-

Jan	-	24	May	-	28	Sept	-	24
Feb	-	23	June	-	26	Oct	-	27
Mar	-	24	July	-	25	Nov	-	31
Apr	-	20	Aug	-	24	Dec	-	31

The Heavy Equipment training ceased on December 15, 1967. The Philco-Ford training staff remaining at the end of the year was reduced to 19. The U.S. dollar allocations for contract services were about $950,000 and there were approximately 25 man-years of technical assistance.

Working with their Thai colleagues, a total of 113 bilingual Instructor Guides (a detailed lesson plan) were produced in the following subject areas:

Surveying
Drafting
Supply
Soils Technology
Roads
Concrete Technology
Dams and Irrigation
Educational Methodology
Heavy Equipment Operation
Geology
Structural Analysis and Design
Bridges
Buildings
Hydrology and Sanitation
Blueprint Reading and Estimating
Supervision
Management
Vehicle Maintenance
Heavy Equipment Mechanics
Hydraulics
Technical English

Approximately 1,000 International Harvester, Catepillar, General Motors Diesel, Allis-Chalmers, and 500 Ford Motor Company Training aids, i/e manuals, wallcharts, filmstrips, recordings and flip charts were acquired under the contract.

In July of 1967, a consolidated and systematized book entitled PHILCO-FORD/ARD CURRICULUM was published. At the end of 1967, all engineering course curricula were again reviewed and revised. This action being the natural outcome of experience received throughout 1967 and from the responses received from the questionnaires. The newly revised curricula were so written as to make best use of the Instructor Guides, a combination lesson plan/unit outline/source material manual written in Thai and English and designed to provide an instructional base.

With 1968 came new curriculum requirements as ARD shifted emphasis from road construction to water resource development. Additionally, a requirement arose to up-grade former graduates to higher level positions such as Design Technician to Chief Design Technician; Draftsman to Design Technician; Construction Foreman to Construction Technician. These were published under a new title by Philco-Ford, Technical Training for Accelerated Development.

U.S. Army Engineering Control and Advisory Detachment (ECAD)

ECAD provided field training in the use of equipment under actual working conditions. This was carried out at two different sites by a five man team of U.S. Army heavy equipment specialists. About 8 man years of services were provided by ECAD personnel. Army manuals developed at the U.S. Army Corps of Engineers school at Ft. Belvoir, Va. were adapted for use at TTAD.

Although both the above contracts have terminated, this project continues at the TTAD Training Center, Northeast Technical Institute, Korat. USOM assistance under Vocational Education was terminated in 1970. However, USOM assistance to TTAD continues under the Office of Field Operations, USOM.

Loan for Improvement of Vocational Education (LIVE) Project 1966 to 1973

This project was designed to expand and improve 25 vocational schools. Included in the LIVE Project are 14 trade and industry vocational schools, Thewes Technical Vocational Teacher Training College, 9 agricultural vocational schools and Bangpra Agricultural Teacher Training College.

The Government of Thailand provided the equivalent of 16 million dollars for building construction, approximately 10 million dollars for operating costs during the six year life of the project and a loan of 6 million dollars was obtained from the World Bank (IBRD) for the purchase of tools and equipment.

The U.S. Government provided nearly 3 million dollars worth of advisory assistance through the services of four USOM direct hire vocational education specialists (16 man-years), a five man contract team of agriculture specialists from California State Polytechnic University (25 man-years) and a seven man team of trade and industrial specialists from Oklahoma State University (30 man-years). The technical advisors services were provided in all technical courses taught in the LIVE Project schools.

The project started in Oct. 1966 and all contract field support was completed June 30, 1973. The contracts terminated on Aug. 31, 1973. The 14 trade and industry schools now have in training a total of 7,000 young people in the mechanical, electrical and building trades. These schools will be graduating about 2,100 per year. The nine agricultural schools have in training a total of 4,000 in agronomy, horticulture, animal husbandry and farm mechanics. They will be graduating 1,250 per year. The two vocational teacher training colleges will be graduating about 280 teachers per year.

About 250 instructors and administrators of the present schools staffs have received advanced training in the U.S. during the life of this project. Nearly four fifths of the training costs were financed by the Royal Thai Government.

The end results of the project should be well trained manpower to meet the demands of the industry and agricultural development. There have been process evaluations of the project by IBRD and the Department of Vocational Education which have been quite favorable. This is significant because a similar project to improve four post-high school technical institutes is getting underway. The successful experiences gained with the processes used in the LIVE Project will be used in the new technical institute program.

A list of instructional materials produced under this project are contained in a separate report.

Agriculture Engineering Training Center

In conjunction with the school farm land development program, USOM provided one man-year of technical assistance in land leveling and irrigation. A complete farm plan was made for the 10 LIVE Project agriculture schools. In order to implement the plans, participants were trained and about $500,000 worth of heavy equipment was provided. This activity is now coordinated with a West German Project at Bangpoon.

The Mobile Trade Training School Program 1965-1972

The Mobile Trade Training School (MTTS) Project was designed and developed by the RTG Department of Vocational Education (DOVE) in 1960 to provide occupational training for out-of-school youths and adults who were not eligible for training in formally graded vocational education and training programs. The MTTS units were established to serve the rural areas. In the more pupulated locations, Polytechnic Schools are provided for this purpose.

The categories in which skill training is offered are determined by a community survey. The length of time that a mobile unit remains in the same location is also based on the training needs of the community. Equipment and instructors are available to provide training in 18 different occupational areas. Training is offered in trades such as auto mechanics, electricity, radio and television repair, metal work, and carpentry. There are also offerings in cosmetology, barbering, dressmaking and tailoring, food preparation, typing, and bookkeeping.

Training is provided in a 300-hour cycle of instruction which is completed in a five-month term. There are two full cycles each year in all of the MTTS units. Classes are conducted twice daily in most of the 41 MTTS's; 09:00 to 12:00 hours and 17:00 to 20:00 hours. In a few selected schools, a third session is provided from 13:00 hours to 16:00 hours. Some of the units also offer a special intensive summer skill training course. Ordinarily, the MTTS units will offer only one basic training cycle of 300 hours in each specific trade area. However, exceptions are sometimes made in some communities so that students can take an additional 300 hours of more advanced work in certain trades to meet the local needs. The student tuition varies from $1.50 to $7.50 per course. This amount depends on the cost of practice material.

There are nine regional Polytechnic Schools, which are located in the larger population centers throughout the country. They are better equipped and staffed than the MTTS's. The Polytechnic Schools all offer the basic 300 hour courses for the out-of-school youth in the city. In addition they offer advanced training cycles of 300 hours of skill training in a specific trade area whereas the MTTS's usually provide only the basic 300 hours course. Those students who are successful in the basic courses offered in the rural MTTS's can continue to take advanced work in the regional Polytechnics.

The teachers of the MITS units and the Polytechnic Schools are graduates from the post-high school technical institutes. These teachers have completed 15 years of education which includes a generous amount of skill training. In addition, they have received an additional year of teacher training designed especially for the MITS program. About 25 of the administrators and faculty members of the MITS and Polytechnic schools have received training abroad. Leadership development and teacher upgrading for MITS personnel are usually provided at the Polytechnics during the summer session.

The present MITS program is capable of providing training for about 41,000 persons each year. The Polytechnics can graduate about 10,000 students per year. Usually the students develop a saleable skill which makes it possible for them to get a job in local enterprises. In other instances, the graduate is able to conduct a paying business of his own.

USOM assisted in development of the MITS Program by providing 7 man-years of technical assistance, commodities, and participant training for 25 persons. The Thai Government budget for the MITS program has increased from ฿3.7 million ($190,000) in 1966 to ฿18.79 million ($940,000) in 1970. USOM input over the life of the project 1965-1972 was about $2.8 million. Recently the MITS's were transferred to the Adult Education Division, but the Polytechnic Schools remain with the Department of Vocational Education.

Short-Term Specialists

In addition to the major efforts described above, there have been a number of short-term consultants provided under the institutional contracts, personal services contracts and from direct hire sources. These specialists were brought in to assist in very specific areas and were in Thailand for periods ranging from two weeks to three months. Their activities have not been included in this report.

USOM
Office of Education
December 4, 1973

Vocational/Technical/Agricultural Education Reports

Prepared by
RTG Vocational Educators and
USAID Contractors Working with
USOM Sponsored Projects

1. Technical Institutes of Thailand, 1959, Wayne State University Team.

2. Terminal Report of the SEATO Skilled Labor Project, 1965, University of Hawaii.

3. Final Report, Technical Training for Accelerated Development, 1969, Philco Ford Corp.

4. Development of Vocational Education in Thailand, 1970, Lyle B. Pember.

5. An Evaluation of LIVE Project and Related Services, 1972, Hubert D. Reid.

6. Systematic Long Range Program Planning for Vocational Education, 1972, Dr. C. Thomas Olivo.

7. LIVE Project Progress Reports, 1967-1973, Department of Vocational Education.

8. California State Polytechnic College Agriculture Education Contract Reports, 1967-1973, California State Polytechnic College

9. Oklahoma State University Trade and Industry Contract Reports, 1968-1973, Oklahoma State University.

10. Mobile Trade Training Schools and Polytechnic Schools, 1970 Vocational Promotion Division, MOE.

PARTICIPANTS TRAINED UNDER

IBRD VOCATIONAL EDUCATION DEVELOPMENT PROJECT

UP-DATED TO JUNE 1973

FY 67

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
A.	AGRICULTURE					
1.	Mr. POTE Prombutra	18	Agri. Ed..... Cal Poly	M.A.	04/08/69	Bangpra
2.	Mr. VINICH Chotsawang	12	Agri. Ed..... Cal Poly		02/02/68	Nan
3.	Mr. NAPAKOON Siriwan	17	Agri. Ed..... Cal Poly	M.A.	03/10/69	Bangpra
B.	TRADE AND INDUSTRY					
1.	Mr. SEG Thongoun	19	Ind. Ed. Utah State U.	M.S.	02/07/69	Thewes
2.	Mr. DECHA Sirirat	19	Ind. & Tech. Ed. Utah State University	M.S.	04/06/69	Thewes
3.	Mr. SRISOT Panich	19	Ind. Ed. Utah State U.	M.S.	03/17/69	Thewes
4.	Mr. KUMNUNG Sakhakorn	12	Tech. Ed. Utah State U.	B.S.	09/15/68	Thewes

FY 68

PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
A. AGRICULTURE					
1. Mr. SA-ARD Bothipan	21	Cal-Poly	M.A.	12/25/69	Burirum
2. Mr. THAWIL Bua-Ngham	21	Agri. Ed.....Cal Poly	M.A.	03/27/70	Bangpra
3. Mr. SUNAN Thongdee	21	Agri. Ed.....Cal Poly	M.A.	02/22/70	Bangpra
4. Mr. WITHAYA Kanthawichai	24	Agri. Ed. Mich. State U.	M.S.	12/28/70	Bangpra
B. TRADE AND INDUSTRY					
1. Mr. SOMSAK Idhirasunthorn	24	T & I Ed.....O.S.U.	M.S.	09/27/69	Thewes
2. Mr. CHITCHAI Sundhaswin	24	T & I Ed.....O.S.U.	M.S.	02/11/69	Advanced study OSU.
3. Mr. PRANOTE Nagamati	21	T & I Ed.....O.S.U.	M.S.	03/17/70	Evaluation and Planning Div.

FY 69

A. AGRICULTURE					
1. Mr. AHNON Thiengtrong	18	Agri. Ed.....Cal Poly	M.A.	06/23/70	Chiengmai

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
2.	Mr. PREECHA Gerdgrajang	18	Agri. Ed..... Cal Poly	M.A.	06/30/70	Nan
3.	Mr. BURA Karnjanasirm	18	Agri. Ed..... Cal Poly	M.A.	05/30/70	Ladkrabang
4.	Mr. PRANOTE Kulprasoot	18	Agri. Mech.... Cal Poly	Dip.	06/30/73	Nan
5.	Mr. PRAJUAB Thong-plaoe	18	Agri. Mech.... Cal Poly	Dip.	06/30/73	Pitsanuloke
6.	Mr. SURAPHOLE Herabat	18	Agri. Mech.... Cal Poly	Dip.	06/30/73	Bangpra
7.	Mr. TANIT Malisuwan	18	Agri. Mech.... Cal Poly	M.S.	06/25/71	Surin
8.	Miss RATANA Harnjirakarn	18	Voc. Agri..... Cal Poly	M.S.	09/27/71	Nan
9.	Mrs. PREEYA Ketudat	18	Agri. HE. (Food Serv.) Cal Poly	M.A.	07/31/71	Chiengmai
B.	TRADE AND INDUSTRY					
1.	Mr. PRAKORN Suddhiprakarn	18	Ind. Ed..... O.S.U.	M.S.	03/22/71	Thewes
2.	Mr. CHIT Iadsung	18	T & I Ed..... O.S.U.	M.S.	01/16/71	Thewes
3.	Mr. UMPHORN Pugdeechati	18	T & I Ed..... O.S.U.	M.S.	09/01/70	Prathumwan
4.	Mr. SUWAT Ratanabhoom	18	T & I Ed..... O.S.U.	M.S.	09/05/70	Northern Bangko
5.	Mr. SOMNUK Srisamoodkham	18	T & I Ed..... O.S.U.	M.S.	01/19/71	Chiengmai
6.	Mr. SONGDEJ Wongpanya	18	T & I Ed..... O.S.U.	M.S.	01/13/71	Udorn

FY 69

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
7.	Mr. PRASIT Prommol	18	T & I Ed.....O.S.U.	M.S.	01/19/71	Songkhla
8.	Mr. VISIT Nantajiwarawat	18	T & I Ed.....O.S.U.	M.S.	01/19/71	Rajburi
9.	Mr. SOMCHAI Pealsook	18	T & I Ed.....O.S.U.	M.S.	06/14/70	Ubol
10.	Mr. PRACHARK Pukdee-rut	18	T & I Ed.....O.S.U.	M.S.	03/29/71	Nakornsawan
11.	Mr. SUMOL Kongsawasdi	18	T & I Ed.....O.S.U.	M.S.	03/18/71	Phuket
12.	Mrs. BOONCHITTA Nalamlieng	18	T & I Ed.....O.S.U.	M.S.	01/14/71	Thewes
13.	Mr. VICHIT Thongmitr	24	T & I Ed.....O.S.U.	M.S.	06/30/71	Thewes
14.	Mr. CHAMNIAN Kamchard	18	T & I Ed.....O.S.U.	M.S.	01/17/72	Thewes

FY 70

A. AGRICULTURE

1.	Mr. CHAMNONG Kosuwin	19	Agri. Ed.....Cal Poly	M.A.	11/17/71	Chumporn
2.	Mr. DHAMNOON Boonthong	18	Agri. Ed.....Cal Poly	M.A.	01/25/72	Trang
3.	Mr. BOONCHUAY Boonthong	12	Agri. Ed.....Cal Poly	M.A.	04/04/72	Nan
4.	Mr. PRAWAT Yanachai	18	Agri. Ed.....Cal Poly	M.A.	01/30/72	Chantaburi

FY 71

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
2.	Mr. BOWORN Muangsuwan	6	Textbook & Teaching Material	-	08/04/72	MOE
3.	Mr. THONGCHAI Suwatmekin	"	" " "	-	"	"
4.	Mr. PRAYOON Gosinjit	"	" " "	-	"	"
5.	Mr. PINET Wichaidit	"	" " "	-	"	"
6.	Mr. PINIT Sawangkam	"	" " "	-	"	"
7.	Mr. VIRA Layraman	"	" " "	-	"	"

FY 72

THIRD COUNTRY STUDY TOUR

1.	Mr. SOMSAK Idhiratsunthorn	2 wks.	Skill Competition - Taipei	-	05/09/72	MOE
	Mr. SRISOT Panich	"	" " " " "	-	"	"
2.	Mr. ARTORN Chandavimol	2 wks.	Skill Competition - Korea Japan	-	09/20/72	MOE
	Mr. SEG Thongoun	"	" " " " "	-	"	"
3.	Dr. SURAPHOL Sanguansri	1	Agricultural Education Association - Taiwan, Korea	-	10/23/72	Bangpra

FY 70

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
5.	Mr. PIAN Charnsuebsri	19	Agri. Ed..... Cal Poly	M. A.	01/31/72	College Div.
6.	Mr. SUMIT Mungkung	18	Agri. Ed..... Cal Poly	M. A.	12/26/71	Nakorn - sithamaraj
B.	TRADE AND INDUSTRY					
1.	Mr. TAWEEWAT U-Thawee	18	T & I Ed..... O. S. U.	M. S.	07/08/72	Evaluation and Planning Div.
2.	Mr. VICHIEN Tontraseney	18	T & I Ed..... O. S. U.	M. S.	06/23/72	" "
3.	Mr. VICHAI Buasruang	18	T & I Ed..... O. S. U.	M. S.	07/08/72	Samutprakarn
4.	Miss KANITHA Wilairat	18	T & I Ed..... O. S. U.	M. S.	07/08/72	DOVE Project
5.	Mr. CHOOJAI Sriratana	18	T & I Ed..... O. S. U.	M. S.	01/21/72	Evaluation and Planning Div.
6.	Miss CHULEE Sa-Nguannam	18	T & I Ed..... O. S. U.	M. S.	08/02/72	Thewes

FY 71

U.S.A. STUDY TOUR						
1.	Miss SUREE Suvarnasorn	6	Textbook & Teaching Material	-	08/04/72	MOE

FY 73

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
1.	Dr. THANOO Savaengsakdi	2	Technical Level	-	01/12/73	MOE
2.	Mr. SURADEJ Visessurakarn	1	Administration Technical Level	-	06/13/73	MOE
3.	Mr. PONGPUN Varasuntharosoth	3	Administration Technical Level	-		MOE
	Mr. EKACHAI Suntornpong	"	" " "	-		" "
	Mr. PICHET Khongthon	"	" " "	-	"	"
	Mr. CHALIT Suwatti	"	" " "	-	"	"

MOBILE TRADE TRAINING SCHOOL PROJECT

MTTS

RURAL EDUCATION

FY 69

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
1.	Mr. CHAROONG Phasuwan	40	Ind. Ed. - Indiana U.	Ph.D.	05/20/72	MOE - DOVE
2.	U.S.A. STUDY TOUR	6	MTTS	-	06/07/70	MOE - DOVE
	1. Mr. SAMARN Srasi 2. Mr. PHAISARN Chitpraphai 3. Mr. SURAPONG Gaiyagij 4. Mr. AMORN Suriyachan 5. Mr. CHARNCHAI Kulkamtorn					
3.	Mr. SANONG Im-aim	18	Elect. Trng. - O.S.U.	Dip.	08/17/71	MOE - DOVE
4.	Mr. CHITAVEE Bunnag	18	Ind. Ed. - O.S.U.	Dip.	08/21/71	MOE - DOVE

FY 70

1.	Mr. LERSAK Pothisarn	21	Printing - O.S.U.	Dip.	06/05/72	MOE - DOVE
2.	Mr. SOMCHIT Sukavatano	15	Administration - Cal Poly	M.A.	12/09/71	MOE - DOVE

FY 70

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
3.	Mr. PRATHARN Kidjawatana	18	Ind. Ed. - O.S.U.	Dip.	03/25/72	MOE - DOVE
4.	Mr. SURINTRA Iamhirun	18	Administration - O.S.U.	M.S.	02/21/72	MOE - DOVE
5.	Mr. CHAVALIT Maneerat	18	Administration - Indiana U.	M.S.	03/02/72	MOE - DOVE
6.	Mr. PAIROJ Punyarochana	18	Drafting - O.S.U.	Dip.	08/04/72	MOE - DOVE
7.	Mr. PUNYA Wrodlidakorn	20	T.V. Ed. - O.S.U.	Dip.	04/13/73	MOE - DOVE
8.	Mr. SOMSAKDI Sangchan	21	Ind. Ed. - Texas State Technical Institute	Dip.	05/03/73	MOE - DOVE
9.	Mr. UDOM Chainok	18	Ind. Ed. - O.S.U.	Dip.	03/01/73	MOE - DOVE
10.	Mr. SOMKIAT Naophen	22	Administration - Cal Poly	M.A.	06/04/73	MOE - DOVE

FY 71

1.	Mr. BOONLERT Poplap	21	Wood Working - Catawba Valley Technical Insti.			MOE - DOVER
2.	Mr. CHALERM Juprachakorn	21	Auto Engine & Transmission Oklahoma State Technical			MOE - DOVER

	PARTICIPANTS	TIME MONTHS	INSTITUTION	DEGREE	DATED RETURNED	TO POSITION
3.	Mr. AUN Pangputhipong	13	Machine Shop - O.S.T.	Dip.	10/20/73	MOE - DOVE
4.	Mr. BOONLUE Ngamsanga	21	Ind. Elect. - O.S.T.			MOE - DOVE
5.	Mr. SUEBPONG Raksasab	21	Major Appliance Repair Oklahoma State Technical			MOE - DOVE
6.	Mr. VARAVUT Thong-Ngern	21	Small Engine Repair Oklahoma State Technical			MOE - DOVE
7.	Mr. VINAI Saihong	21	Auto Body Work - O.S.T.	Dip.	10/19/73	MOE - DOVE
8.	Mr. KLA Somtrakul	13	Administration - Morehead State University	M.A.	08/21/73	MOE - DOVE

PAMPHLETS, BOOKS AND OTHER EDUCATIONAL PUBLICATIONS
OF THE SEATO SKILLED LABOR PROJECT

1. ACTIVITY ANALYSIS OF AUTO-MECHANICS

Dr. Thanoo Swaengsukdi
Thai only
1961
pp. 35

2. AUTO-MECHANIC TEACHER COURSE OUTLINE

Mr. Joseph Acosta
English and Thai
Illustrated
Translation: Vichit Thongmitr
1959-60
pp. 320

3. COLOR DYNAMICS IN INDUSTRY

Mr. Pranote Nakamdee
Thai only
1961
pp. 8

4. DEVELOPMENT OF A SCIENCE LABORATORY

Mr. J. B. Baker
English only
Illustrated
1964
pp. 104

5. DEVELOPMENT OF A SUPERVISORY PROGRAM FOR TRADE SCHOOLS

Dr. Claude H. Ewing
English only
January, 1964
pp. 20

6. ELECTRICAL CODE FOR THAILAND

Mr. Sommai Simargool
Thai only
Published By: Metropolitan Electric Authority
1960
pp. 8

7. JOB UNITS IN ARC WELDING

Mr. Earvel S. Hoofman
English and Thai
Illustrated
Translations: Mrs. Kamala Nutabhundhu
Mr. Tongdee Tong-oun
Miss Chivit Chavananonta
Mr. Visutdi Yoonark
Drawings: Miss Chivit Chavananonta
1959-61
pp. 168

8. JOB UNITS IN OXY-ACETYLENE WELDING AND CUTTING

Mr. Earvel S. Hoofman
English and Thai
Illustrated
Translations: Mrs. Kamala Nutabhundhu
Mr. Tongdee Tong-oun
Miss Chivit Chavananonta
Mr. Visutdi Yoonark
1959-61
pp. 192

9. JOB UNITS IN SHEET METAL

Mr. Earvel S. Hoofman
English and Thai
Illustrated
Translation: Mrs. Chivit Rachatanavin
1959-1962
pp. 310

10. OCCUPATIONAL INFORMATION CHARTS

Mrs. Kamala Nutabundhu
Thai only
1965
pp. 35

11. POLICY OF ADMINISTRATION FOR VOCATIONAL SCHOOLS

Mr. Rabil Seetasuwan
Thai only
1964
pp. 181

12. ROOF FRAMING (BUILDING CONSTRUCTION)

Mr. Pranote Nakamdee
Thai only
1961
pp. 71

13. THE 18 SEATO PROJECT SCHOOLS: A GUIDE IN SUPERVISION AND ADMINISTRATION

Dr. Thanoo Swangsukdi
Thai only
1961
pp. 301

14. STEEL SQUARE (BUILDING CONSTRUCTION)

Mr. Pranote Nakamdee
Thai only
1961
pp. 27

15. SUMMARY OF CONFERENCE NOTES-SUPERVISION OF PROJECT SCHOOLS
Second Coordinators Conference
English
December 20-21, 1961
pp. 10

16. SUMMARY OF COORDINATORS CONFERENCE NOTES-SUPERVISION OF PROJECT SCHOOLS
English
June 26-30 and December 20-21
pp. 9

17. TEACHERS HANDBOOK FOR HAND-TOOLS (BUILDING CONSTRUCTION)

Mr. Sombut Chankasem
Thai only
1963
pp. 72

18. TEACHERS HANDBOOK FOR POWER TOOLS (BUILDING CONSTRUCTION)

Mr. Rabil Seetasuwan
Thai only
1964
pp. 181

19. TEACHER MADE TEST

Mr. Banyatta Soonsinpai
Thai only
1961
pp. 22

20. THEWES ESTABLISHMENT

Thewes Staff
Thai only
1962
pp. 86

Note:- One or more copies have been placed in the library of the Thewes Vocational Teacher Education College.

TEXTBOOKS AND LESSON SHEETS

Technical and Trade Subjects

Prepared by

Theves Vocational Teacher Training College
Division of Technical and Trade Schools
Department of Vocational Education

No.	Title of Books	Number of Subjects	Number of Copies Printed	Remarks
1	Automechanics	14	7,000	
2	Building Construction	8	9,200	
3	Machine Shop	4	5,000	
4	Welding and Sheet Metal	7	9,000	
5	Electricity	7	15,500	
6	Radio and Telecommunication	15	23,600	
7	Science	7	20,500	
8	Mathematics	6	20,070	
9	Thai Language	6	24,000	
10	English Language	3	10,500	
11	Social Study	4	11,500	
12	Architectural Design	5	24,000	
13	General Knowledge	4	18,500	
	T o t a l	90	198,370	

Automechanic Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and teaching program	500	
2	Teacher's handbook on fuel pumping system	500	
3	Auto electricity	500	
4	Estimating the cost of auto repair	500	
5	Body repair and painting	500	
6	Overhauling of engine	500	
7	The use of car and safety measure	500	
8	Power transmitting system 2	500	
9	Under carriage 2	500	
10	Gasoline engine	500	
11	Auto Electricity	500	
12	Diesel engine	500	
13	Under carriage 1	500	
14	Power Transmitting System 1	500	
		7,000	

Building Construction Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and Teaching Program	800	
2	Job sheet on building construction M.S. 4	500	
3	Lesson sheet on building construction M.S. 5	800	
4	Job sheet on building construction M.S. 5	800	
5	Teacher's handbook on building construction M.S. 5	300	
6	Handbook on Woodwork	1,000	
7	Handbook on Woodwork Machine	2,000	
8	Survey	3,000	
		9,200	

Machine Shop Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and teaching program	500	
2	Testing sheet on machine shop	1,000	
3	Introduction to mechanical instruments	2,000	
4	Materials for machine shop	1,500	
		5,000	

Welding and Sheet Metal Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and Teaching Program	500	
2	Job sheet of M.S. 4	1,000	
3	Job sheet of M.S. 5	1,000	
4	Arc Welding Unit	1,500	
5	Sheet Metal Unit	1,500	
6	Hobart's Handbooks on Welding	3,000	
7	Handbook on Making Teaching Time Table	500	
		9,000	

Electricity Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and Teaching Program	500	
2	Operation sheet and job sheet on introduction to electricity	5,000	
3	Introduction to electricity	2,000	
4	Job assignment sheet on introduction of electricity	2,000	
5	General electricity	2,000	
6	Principles and service of refrigerators	2,000	
7	Ammeters	2,000	
		15,500	

Radio and Telecommunication Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and Teaching Program	500	
2	Handbook on FM Transmitter	500	
3	Handbook on AM/FM receiver	500	
4	Job sheet on AM/FM receiver	800	
5	Handbooks on sound systems	500	
6	Job sheet on sound systems	800	
7	Transister	4,000	
8	Introduction to electronics	2,000	
9	General knowledge on radio	2,000	
10	Pulse technique	2,000	
11	Electronic tubes and circuits experimentation	3,000	
12	Experiments on Electronic Tester	3,000	
13	The theory of television	3,000	
14	Job sheet on electricity 1	500	
15	Job sheet on electricity 2	500	
		23,600	

Science Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and Teaching Program	500	
2	Mechanics 1	4,000	
3	Mechanics experimentation	4,000	
4	Heat 1-2	4,000	
5	Heat experimentation 1-2	4,000	
6	Mechanics 3	2,000	
7	Mechanics 4-5	2,000	
		20,500	

Mathematics Section

No.	Titles of Books	Number of Copies	Remarks
1	Mathematics on Trades	8,000	
2	Mathematics on Building & Construction M.S. 5	3,000	
3	Technical Mathematics on Trades M.S.5	5,000	
4	Mathematics on radio	2,000	
5	Mathematics on Building Construction M.S. 6	2,000	
6	Handbook on Mathematics M.S. 4	70	
		20,070	

Thai Language Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and Teaching Program	500	
2	The Planning on Teaching Thai Language	500	
3	Thai Reading M.S. 4	11,000	
4	Thai Reading M.S. 6	6,000	
5	The rules of the language and the use of language M.S. 4	3,000	
6	The rules of the language and the use of language M.S. 6	3,000	
		24,000	

Technical English Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and teaching program	500	
2	Technical English Reading M.S. 4	5,000	
3	Technical English Reading M.S. 5	5,000	
		10,500	

Social Study Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum and Teaching Program M.S. 5-6	500	
2	Handbooks for M.S. 5-6	500	
3	Social Study of M.S. 5	6,000	
4	Social Study of M.S. 6	4,500	
		11,500	

Designing Section

No.	Title of Books	Number of Copies	Remarks
1	Designing of every trade M.S.4	10,000	
2	Designing on electricity-radio	3,000	
3	Designing on mechanics part 1	3,000	
4	Designing on mechanics M.S. 5	5,000	
5	Designing on building construction M.S. 5	3,000	
		24,000	

General Subjects Section

No.	Title of Books	Number of Copies	Remarks
1	Curriculum of industrial trade	1,000	
2	Successive steps in preparing Lesson Sheets	2,000	
3	Pictures of safety measure in factory	500	
4	Progress Chart	15,000	
		18,500	

LIST OF PUBLICATIONS

Prepared by

Bangpra Agricultural College
Chonburi, Thailand

A. Journals and Newsletters

1.	"The Bangpra Center"	(Thai) Bimonthly	75 p.	Cir. 1000;	1964 to date
2.	"Vo-Ag Newsletter"	(Thai) Bimonthly	30 p.	Cir. 100;	1971 to date
3.	"Rotaract Bulletin"	(Thai) Bimonthly	20 p.	Cir. 200;	1972 to date
4.	"Anusorn Bangpra"	(Thai) Yearbook	200 p.	Cir. 200;	since 1962
5.	"The Bangpra Banner"	(English) Monthly	5 p.	Cir. 100;	1967 - 1970
6.	"Beat the Drum"	(English) Monthly	10 p.	Cir. 200;	1971 - 1973

B. General Information on Bangpra and Agricultural Education

1.	"Bangpra Agricultural College" (Thai) - Bangpra staff	62p.1970
2.	"Bangpra Agricultural College" (English) - Suraphol Sanguansri, Ph.D.	11p.1970
3.	"Vocational Agriculture in Thailand" (English) - Suraphol Sanguansri Ph.D.	8p.1970
4.	"Agricultural Education in Thailand" (Thai) - Suraphol Sanguansri, Ph.D.	25p.1971
5.	"Technical Education in Agriculture" (Thai) - Suraphol Sanguansri, Ph.D.	50p.1973
6.	"Agricultural Teachers and Theirs Administrators" (Thai) - Suraphol Sanguansri, Ph.D.	25p.1973
7.	"Introducing Bangpra Agricultural College" (Thai) - Bangpra staff,	60p.1973
8.	"Bangpra Agricultural College - Student Manual" (Thai) - Bangpra staff,	60p.1973

C. Technical Bulletin and Teaching Manual, by the Bangpra staff

1.	"Vegetable Production"	- Chanai Yodpetch M.S.	187p.1971
2.	"Growing Asparagus"	- Chanai Yodpetch M.S. and Thawil BuaNgarm M.A.	25p.1971
3.	"Student Teaching in Vocational Agriculture"	- Thongchai Suwatmekin, M.S.and Suraphol Sanguansri,Ph.D.	85p.1971
4.	"Thai 101 (Grammar)"	- Sangworn Laprabang B.Ed.	136p.1971
5.	"Thai 102 (Literature)"	- Sangworn Laprabang B.Ed.	108p.1972
6.	"Thai Orchids"	- Sanan Chaidee B.S.	153p.1972
7.	"Plant Hormone"	- Chanai Yodpetch M.S.	34p.1972

8. "Principles of Agronomy"
   - Suraphol Sanguansri, Ph.D. 143p.1973
9. "Audio-Visual Aids" - Pote Onsumlee B.Ed. 73p.1973
10. "Methods of Teaching Agriculture"
    - Nopakoon Siriwan M.A. 54p.1973
11. "Entomology" - Thongpian Siriwan B.S. 78p.1973
12. "Landscape Gardening" - Pote Prombutr M.A. 123p.1973
13. "Orchid Culture" - Sanan Chaidee B.S. 160p.1973

D. Reports - by the Cal-Poly Specialists and the Bangpra staff

1. Recommended Irrigation Program for Bangpra Agricultural College
   - John L. Merriam and Samran Meesorn-Iem, 40p.1969
2. Recommended Irrigation Program for Kalasin Agricultural School.
   - John L. Merriam and Samran Meesorn-Iem, 16p.1970
3. Recommended Irrigation Program for Surin Agricultural College.
   - John L. Merriam and Samran Meesorn-Iem, 40p.1970
4. Recommended Irrigation Program for Chantaburi Agricultural School.
   - John L. Merriam and Samran Meesorn-Iem, 24p.1970
5. Recommended Irrigation Program for Chumporn Agricultural College
   - John Merriam and Samran Meesorn-Iem, 40p.1971
6. Recommended Irrigation Program for Chiengmai Agricultural College
   - John L. Merriam and Samran Meesorn-Iem, 24p.1971
7. Recommended Irrigation Program for Nan Agricultural School.
   - John L. Merriam and Samran Meesorn-Iem, 34p.1971
8. Recommended Irrigation Program for Pitsanuloke Agricultural School
   - John L. Merriam and Samran Meesorn-Iem, 25p.1971
9. Recommended Irrigation Program for Ladkrabang Agricultural School.
   - John L. Merriam and Samran Meesorn-Iem, 24p.1971
10. Recommended Irrigation Program for Nakorn Si Thammarat Agricultural College - John L. Merriam and Samran Meesorn-Iem, 22p.1971
11. "Farm Management - Student workbook" (Thai)
    - Raymond Rhodes and Nopakoon Siriwan 19p.1970
12. "Student Farm Record Book" (Thai) - Raymond Rhodes and
    - Nopakoon Siriwan 32p.1970
13. "Problems in Scheduling Farm Equipments in Thailand" (English)
    - Donald B. McCann 40p.1971
14. "FFT - What it's all about?" (English) - George B. McNeely and Boonlert Jugsurat 42p.1972
15. "Leadership Training for Future Farmers" (English)
    - George B. McNeely 30p.1972
16. "Leadership Training for Future Farmers" (Thai)
    - George B. McNeely, Boonlert Jugsurat, Boworn Muangsuwan, 32p.1972

17. "Student Organization Manual" (English) - George B. McNeely 135p.1972
18. "Student Organization Manual" (Thai) - George B. McNeely and Boworn Muangsuwan 78p.1972
19. "Understanding FFT, Workbook" (English) - George B. McNeely 43p.1972
20. "FFT Chapter Officer Handbook" (English) - George B. McNeely 31p.1972
21. "FFT Chapter Officer Handbook" (Thai) - George B. McNeely and Boworn Muangsuwan 24p.2515
22. "Resource Unit on How to Use Paliamentary Procedure" - George B. McNeely 28p.1972
23. "Successful Public Speaking" (English) - George B.McNeely 38p.1972
24. "Successful Public Speaking" (Thai) - George B.McNeely and Boworn Muangsuwan 28p.1972
25. "Turfgrass Identification" (English) - Donald F. Rodrigues, Nopakoon Siriwan and George B. McNeely 51p.1973
26. "Establishing Space and Utilization Standards for Organized Class Instruction" (English) - George B.McNeely 8p.1973

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O/ED:11/27/73