

TRAINING FOR EMPLOYMENT

IN THAILAND

BACKGROUND STUDY

SURVEY OF TRAINING

INSTITUTIONS, STUDENTS,

GRADUATES AND EMPLOYERS

ASIAN REGIONAL TEAM FOR EMPLOYMENT PROMOTION

Bangkok - May 1975

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## INTRODUCTION TO

### TRAINING FOR EMPLOYMENT IN THAILAND MISSION REPORTS

The Asian Regional Team for Employment Promotion is an inter-agency, interdisciplinary project financed by the UNDP and administered by the ILO. At the request of the Royal Thai Government, ARTEP undertook a special mission to develop guidelines for a national training policy. Mission members were:

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When the mission began its work, no comprehensive study of the many varied and frequently conflicting training efforts in Thailand could be found. In consequence there was no generally agreed upon basis of what actually was going on in occupational training throughout Thailand, from which viable policy guidelines could be projected. Over a period of three years, as time was available from other ARTEP assignments, such a basis was developed and is outlined in the following mission papers:

Background Study: SURVEY OF TRAINING INSTITUTIONS, STUDENTS, GRADUATES AND EMPLOYERS

Report One: PRESENT TRAINING APPROACHES  
Chapter I, Formal Training  
Chapter II - Non-Formal Training

Report Two: MANPOWER FORECASTING IN THAILAND

Report Three: TRAINING FOR EMPLOYMENT GUIDELINES

The Background Study, "Survey of Training Institutions, Students, Graduates and Employers", summarises the pertinent results of an ARTEP statistical survey conducted in 1972-1973 with the assistance of personnel from NESDB, the Department of Labour and the National Statistical Office. At the time of this survey, it was clearly recognised that a truly representative sample could not possibly be covered with the personnel available and within time constraints, and that therefore results valid for the country as a whole could not be expected. The main purpose of the survey was to encourage the heads of training institutions and departments to start finding out what actually became of their graduates, and what employers actually thought about the effectiveness of their training. In this respect, the survey was an immediate success. Further, in the absence of regularly collected data, survey results became a useful indication which confirmed or questioned the direct observations of the ARTEP Training for Employment Mission and the opinions of officials, principals, teachers, students, graduates and employers who were subsequently interviewed in de-

To fill the gap in basic information, the ARTEP Mission issued Report One, "Present Training Approaches"<sup>1/</sup>, covering both the formal and non-formal training systems.<sup>2/</sup> Over a period of ten months, this Report was

<sup>1/</sup> As defined by "CIRF Abstracts", Vol. 12, ILO, Geneva, 1973, "training" comprising activities essentially aimed at providing skills, knowledge, and attitudes required for employment in a particular occupation or occupational group, is distinguished from "education", which consists of activities providing knowledge and developing values and understanding of principles applicable in all walks of life. As used in the ARTEP Training for Employment Mission Report, "training" includes anything so labelled by training institutions and projects in Thailand, and the further distinction is made between such training efforts as actually result in employment, and those which do not.

<sup>2/</sup> "Formal training", as used in ARTEP Training for Employment Reports, refers to specific occupational training occurring within and as an integral part of the hierarchical structured, chronologically graded educational system; academic standing determines access to such training. "Non-formal training" occurs outside of the formal educational system, even when conducted by the Ministry of Education.

circulated in rough draft form to policy and operating departments of concerned ministries and private institutions for their corrections, both as to fact and as to conclusions. As revised, the Report has been accepted as a reasonably accurate summary of training for employment as of 1973, when the initial survey and studies all over Thailand were made.

Because manpower forecasting has been widely considered the rationale and essential basis for training planning, the ARTEP Mission issued Report Two, "Manpower Forecasting in Thailand", an inquiry into past uses, possible utility of and alternatives to manpower forecasting in employment training planning.

Report Three, "Training for Employment Guidelines", has been presented within the following context:

1. Recommendations in Report One assumed the basic structure of training approaches would continue relatively unchanged. Subsequently, there seems a growing consensus among responsible officials in all concerned ministries that presently overlapping, conflicting and sometimes ineffectual training approaches must be subordinated to a more rational overall national training approach. To further this trend, the ARTEP Mission has been urged by the RTG to express its position in more positive terms.
2. The Mission's view is that, to be effective, policy must be formulated in terms of its implementation under existing and achievable conditions. It wishes to disassociate itself from clarion calls to total reform; this is not the best of all possible worlds and effectively influencing Government policy means seeking alternatives and gradual approaches which can be utilised by the existing government machinery to stem undesirable trends and bend government support toward more realistic objectives.

3. The foregoing obviously is not an undertaking for an external agency working alone. The ARTEP Training for Employment Mission was not organised as a research or technical exercise but to create the basis for policy determinations by the Government which are implementable and therefore actually used. This objective can be accomplished only by working within Thai administrative and political structures.
4. High level policy committees are now working toward not only a directional but also a jurisdictional consensus, to which outside advice can best contribute by maintaining a properly secondary role.

The Guidelines presented in Report Three are a series of working hypotheses, tools to be used by the Government as it sees fit. Hopefully they will be altered and refined so as to conform to the requirements of national, social and economic development as expressed in the Fourth Development Plan. By close collaboration during the ensuing plan period, all concerned ministries and agencies can maximise the utility of these guidelines under existing and achievable conditions in Thailand.

BACKGROUND STUDY

SURVEY OF TRAINING INSTITUTIONS, STUDENTS, GRADUATES AND EMPLOYERS

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SURVEY OF TRAINING INSTITUTIONS, STUDENTS, GRADUATES AND EMPLOYERS

P R E F A C E

At the start of this background study, Mr. Ole Wessberg was responsible for the design of questionnaires, the fieldwork and the tabulation. He was assisted while Miss Lenie Wong Meeuw Hing, Mr. Klaus Bettenhausen and Khun Sutthi Chayodom of ARTEP, Khun Ruangdej Srivadhana of Kasetsart University, and Khun Aram Waranyuwat and Khun Suphair Senamontri from the Department of Labour of the Royal Thai Government.

The main burden of effort and responsibility in producing this background study lay in the analysis of initial survey results. This was the work of Miss Lenie Wong Meeuw Hing.

Final editing was by Mr. S. P. Agarwal and Mr. Lars Lovdahl, ARTEP Team members.

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1. Coverage and Selection of Respondents

The survey covered a small sample of training institutions of all kinds, offering certificate or diploma level courses or short term courses and located in different parts of the country.

The frame for drawing the sample was the list of institutions as in 1971, provided by the Department of Vocational Education, Ministry of Education.

A sample of 71 institutions was initially drawn, but because of non-response from 12 of them, only 59 institutions provided data for analysis.

Subject to the constraint of a small sample, care was taken to visit institutions in each of the four regions of the country, viz. North, North-East, Central and South. Bangkok and Thonburi were included in the Central region.

Four types of respondents were taken, viz. headmasters of the selected institutions, students, graduates and drop-outs.

The procedure of selecting the respondents is described in the following paragraphs.

Selection of institutions (headmasters)

Training institutions that existed in 1971 were classified according to their location (4 regions) and the level and type of courses that they offered, and for which the following classification was adopted:-

Certificate level (MS 4-6)

- a) Government Trade Schools
- b) Government Technical Schools
- c) Government Girls' Trade Schools
- d) Private Commercial and Industrial Schools
- e) Agricultural Schools
- f) Technical Institutes

Diploma level (Grades 1-2, 3-4)

- a) Government Technical Schools
- b) Agricultural Colleges
- c) Technical Institutes
- d) Technical Teachers' Training Institutions

Short courses: private

- a) Private Trade Schools
- b) Private Commercial Schools

Short courses: government

- a) Adult Vocational Education Schools
- b) Mobile Trade Training Schools (MTTS)
- c) Polytechnic Schools

Because of the limited time available for field visits, only 71 institutions in all were selected. This naturally meant a very small number of institutions of certain types, and where this number was less than four, not all the regions could be covered. The selection of institutions was made with the help of random numbers. The headmasters selected for interview were the ones who ran the selected institutions.

### Selection of students

Student respondents for the survey were chosen from among the students enrolled in the selected institutions at the time of field visits. All the students on the rolls were classified according to their grade and field of training. A minimum sample of 10, and a maximum sample of 100 students was assigned to each institution, depending on the total enrolment and its distribution by trade and trade. Within these limits, the sample was chosen so as to (i) take 10 per cent of the total enrolment, (ii) take one-half of the sample from the highest grade and the rest from all the other grades put together, and (iii) assign the sample to trades in proportion to their enrollment. The selection of students was made with the help of random numbers.

### Selection of graduates

Graduate respondents for the survey were chosen from among those who had graduated from the selected institutions during the last three years. The sample included 20 per cent of the graduates of the last year and 10 per cent of the graduates of each of the two years prior to that. The trade-wise allocation of the sample was in proportion to the number of graduates. The selection was made with the help of random numbers.

### Selection of drop-outs

Respondents of the category of drop-outs were chosen from among those who had left the selected institutions without graduation during the last three years. In the case of the certificate and diploma level courses, the total number of drop-outs was small enough to be included in totality in the survey. However, short-term courses had a much larger number of drop-outs and so a sample had to be taken. The size of the drop-out sample in such cases was taken to be approximately equal to that of the graduate sample. The selection was made with the help of random numbers.

2. Field Investigation and Data Processing

Headmasters and students were interviewed by small teams, consisting of an expert from ARTEP and Thai speaking enumerators. Questionnaires prepared in advance were used for these interviews. A mail questionnaire (with a stamped return envelope) was sent to the sample of graduates and drop-outs, at the addresses given in school records. A letter explaining the aims and objectives of the survey and seeking their cooperation was also enclosed.

The survey among headmasters and students was carried out from the middle of August to the middle of September 1972. The mail questionnaires were sent out during October and November 1972, specifying 5 December 1972 as the last day to mail back the filled in questionnaires. Neither the graduates nor the drop-outs were reminded.

The processing of the data contained in the questionnaires was done at ARTEP with the help of statistical assistants who knew Thai. The processing was done manually, without the use of a computer. The filled in questionnaires provided material for a large number of tables, but only those directly relevant to the issues discussed in the series of reports on "Training for Employment" have been made use of in this study.

3. Main Results

A. Students' objectives and aspirations

The main objectives for which training institutions of different types and levels have been set up by the Government are stated in official reports. For example, the purpose of the vocational education programme at the upper secondary level is specified to be 'to prepare the prospective workers for entry into occupations which require a high degree of skill'<sup>1/</sup>. Similarly, the purpose of the short course trade training programme is stated to be 'to develop the specific skills needed to enter certain occupations of less-skilled classification, for the unemployed, and to refresh the skills of those who are already employed or wish to change their occupation'<sup>2/</sup>.

The survey attempted to ascertain from a sample of students if they had joined the courses with the same objectives as are envisaged by the Ministry. More specifically, they were asked whether, upon graduation, they expected to take up employment or to join a course of education at the next higher level. A lack of correspondence between the objective of the Ministry and that of the students would then be apparent in cases where the Ministry viewed the course as terminal, that is, preparatory to employment, whereas the students viewed it as preparatory to the next higher level of education.

Replies given by students of different types and levels of courses are summarised in Table 1. A large majority of certificate level students did not view the course as terminal and were thus pursuing an objective different from what the course was supposed

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<sup>1/</sup> Ministry of Education, Department of Vocational Education, Vocational and Technical Education in Thailand, 1970,71, May 1971, p.15.

<sup>2/</sup> Ibid., p.18.

to do. The extent of discrepancy was relatively less in the case of short-term courses and diploma level, except for students from Government Technical Schools where 3 students out of 4 intended to go on studying after graduation.

From students who expected to take up employment after graduation, a further question was asked as to the type of enterprise or organisation where they desired to work. Their replies (Table 2) obviously show a marked preference for Government employment. Furthermore, the replies that the students gave about the desired type and place of work are summarised in Tables 3 and 4 respectively.

#### B. Student selection

General procedures for admitting students to different categories of institutions have been laid down by the Government. The main consideration underlying these procedures is 'to ensure equal opportunity of education and to promote integration of technical education with the local community.'<sup>1/</sup>

Since the number of applicants is generally far in excess of the number of places available in training institutions, the selection of students is often made on the basis of a competitive examination designed to test academic knowledge, or simply on the basis of 'first come, first served'. A more effective way of choosing students for training would probably be an aptitude test, and some of the institutions do administer such tests. The practice of selection by interview is also quite common, particularly for short-term courses. Often, a combined use of two or more criteria is resorted to. The procedures adopted by the institutions included in the survey are shown in Table 5.

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<sup>1/</sup> Ibid., p.22.

C. Theoretical and practical components of the curriculum

The curriculum of most of the institutions was the same as standardised by the Ministry of Education. Two of the technical institutes indicated that they developed the curriculum themselves but then got it approved by the Ministry. In the case of private institutions offering short-term courses in trades or commercial subjects, the curriculum was largely developed by the institutions themselves, with or without the approval of the Ministry.

The headmasters of the institutions indicated approximate percentages of the theoretical and practical time components of the curriculum. For the certificate and diploma level courses, the practical component varied between 35 and 52 per cent of the curriculum. Short-term courses devoted a larger time fraction (between 60 and 75 per cent) of the curriculum to practical training. Details are presented in Table 6.

D. Teachers' qualifications and industrial experience

The survey questionnaire for the headmasters asked about the qualifications of teachers and training instructors. Unfortunately, the types of qualifications in terms of which the headmasters were asked to answer this question were mostly academic with the result that specific information about the industrial experience of instructors could not be collected in the survey.

The headmasters' replies about the academic qualifications of teachers are summarised in Table 7.

E. Adequacy of equipment and materials

The heads of the technical institutes included in the survey felt that the training equipment was inadequate. A similar opinion was expressed by the headmasters of the Adult Vocational Education Schools giving short-term courses. The headmasters' replies are summarised in Table 8.

Students of the institutions were also asked about the adequacy of training materials. Such a question was not included in the headmasters' questionnaire, although they were asked to indicate the percentage of expenditure devoted to materials. Among the replies received from students, the one worth mentioning was from the students of agricultural colleges; over 70 per cent of them spoke of inadequacy of both equipment and material. (Table 9).

F. Extent and causes of drop-out

Short-term courses, and particularly MITS and Polytechnic schools, had the highest rate of drop-out (30 to 35 per cent) in 1970 and 1971. The drop-out rate was quite low (3 to 7 per cent) for agricultural colleges and Government technical schools. Students of Technical institutes had the highest percentage (24%) of repeaters, but no drop-outs. (Table 10).

An attempt was also made in the survey to ascertain causes of drop-out. Students of MITS and Polytechnic schools attributed this to lack of financial support. The desire to switch over to the academic stream of education was mentioned as the only cause of drop-out from Government technical schools. Details are presented in Table 11. The great majority of the drop-outs obviously wanted to go back to school again. Table 12 further shows that the bulk of this group, however, would like evening courses, and many would choose a subject other than the one studied earlier.

G. Average cost per student

Estimates of average cost per student, both current and capital, for different types and levels of institutions are available in official reports. For example, it was estimated by the Ministry of Education that the average unit recurrent cost in public vocational schools was just under 3,000 bahts per student per annum, and the corresponding figure for public technical schools was 4,700 bahts.<sup>1/</sup> Similarly, the capital cost per place in public vocational schools was estimated to be at least 2.5 times that in ordinary secondary education.<sup>2/</sup>

Since the percentage of drop-outs and repeaters varies from course to course, an adjustment for the same needs to be made in order to obtain a more realistic estimate of unit cost per successful student. Furthermore, a more meaningful estimate of the unit capital cost would be 'the rent per student that would have been paid by schools if buildings and equipment had been rented on the open market.'<sup>3/</sup>

Because of inadequate data, the survey did not attempt to estimate average costs per student for different types of courses.

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<sup>1/</sup> Ministry of Education, Education in Thailand, 1971, p.41.

<sup>2/</sup> Ibid., p.41.

<sup>3/</sup> Mark Blaug, The Rate of Return to Investment in Education in Thailand, 1971, p.4-2. (Mimeographed).

## H. Graduate employment

### (a) Follow-up by the institution

A majority of the institutions included in the survey mentioned that they had a follow-up programme for their graduates. It would have been useful if detailed information were collected as to how the follow-up was done. However, the survey questionnaire did not provide for ascertaining such details.

### (b) Contacts between institution and industry

The only type of contact with industry, about which information was asked for in the questionnaire, related to finding jobs for the graduates. About one-fourth of the institutions admitted that they had no such contacts with industry, while about 10 per cent claimed to have a great deal. Two private institutions seemed to guarantee that their graduates would succeed in finding a job.

The other types of contact with industry, about which information could have been collected, might include (i) visits by students to see equipment and working conditions or to receive practical training, (ii) visits by teachers to obtain practical experience, and (iii) the possibility of the experienced staff members of the industry visiting the institutions to conduct a part of the training. As matters stand, no information on these aspects was collected during the survey, although the ARTEP team discussed such questions generally during the course of their visits to training institutions.

### (c) Employment status of graduates

Detailed information on the employment status of graduates was collected during the survey. To begin with, it was ascertained how many of the graduates were employed or unemployed, or studying at the time of the survey, and this information was tabulated by year of

graduation from the training institution. Tables 13 and 14 present the details. The percentage of graduates who were either unemployed or studying was quite high except for the graduates of technical teachers' training institutions.

Another type of detail which was ascertained and tabulated relates to status; that is, to show how many of the graduates were salaried employees and how many were self-employed. (Table 15). The percentage of the self-employed was high among graduates of the Government girls' trade schools, and also among graduates of the short-term courses (except private commercial schools).

For each type of training institution, a cross-classification of the employment status of graduates and the trade studied was also prepared. Details are presented in Tables 16 to 20.

(d) Type of enterprise and job and its location

It was mentioned in section 3.A that students who expected to take up employment after graduation showed a marked preference for Government employment (reference Table 2 already presented). The type of enterprise where graduates actually worked is shown in Table 21. Except for graduates of Government Trade Schools and Government Technical Schools, a majority of graduates of other institutions did not work for Government. Considerable difference between students' expectations and graduates' experience as to the type of employer is thus obvious.

A reference was also made in section 3.A to Tables 3 and 4 which show the students' replies concerning the desired type and place of work. Table 22, indicating the types of job in which graduates were actually employed, enables a comparison with Table 3 to be made. Supervisory jobs, which students expected to obtain,

were not so common among the graduates. A similar comparison between students' expectations and graduates' experience as to the place of work cannot be made because of lack of adequate data for graduates.

(e) Comparison between field of study and field of work

Except for graduates of Government Technical Schools (Diploma level) and Adult Vocational Education Schools, only a minority of other graduates admitted that they were employed in a field different from the one in which they were trained. Those who felt that the field of employment was not different from the field of training included teachers, and presumably the subjects that they taught were similar to the ones that they had studied themselves, although this was not ascertained during the survey. (Table 23).

(f) Income earned by graduates

Income data have been tabulated for graduates of each type of institution according to the type of job held by them at the time of the survey. These are presented in Tables 26 to 33. For purposes of comparison, three other figures are given in these Tables, viz. (i) income earned by drop-outs, (ii) income expected by students, and (iii) income expected by unemployed graduates.

The income earned by drop-outs was often a little less than that earned by graduates of the same type of institution, although the reverse was true in a few cases. Income expectations of students were generally on the high side. Even some of the unemployed graduates had income expectations a little above the actual income earned by graduates.

It was mentioned in subsection 3.H(c) that a relatively high percentage of graduates from short-term courses was self-employed. Income data of such graduates from MTTS and Polytechnic schools

have been tabulated separately and are shown in Table 34. The types of work performed by self-employed graduates were different from the ones performed by those who graduated from the same type of institution but who took jobs as salaried employees. Because of this, a comparison of income between the employees and the self-employed has to be made with caution. In the case of MTTTS, the self-employed graduates earned a little less than the graduate employees.

(g) Duration and causes of unemployment

The incidence of unemployment at the time of the survey was found to be fairly high, among graduates of the various training courses except technical teachers' training and diploma level courses of Government technical schools. (Tables 13 and 17 already referred to). The situation of graduates of short-term courses was particularly bad. Furthermore, even graduates who were employed at the time of the survey had, in many cases, experienced unemployment for a certain length of time before they got a job.

Table 35 shows the duration of unemployment for graduates before they got a job. Unemployment up to a period of ten months was fairly common. Some of the graduates of short-term courses reported the duration of unemployment to be as long as two years.

Reasons for unemployment have been tabulated separately for (i) those who ultimately found a job, and (ii) those who were unemployed at the time of the survey. Non-availability of a job was a fairly common reason applicable to both the groups of graduates. (Tables 36 and 37).

J. Employers' views

An attempt was made in the survey to ascertain views of some of the employers concerning the role of pre-employment education and training. It was found that, although the level of education in white-collar jobs in Bangkok-Thonburi was quite high, for blue-collar jobs the employers did not bother about the educational background of applicants. Almost all the establishments visited during the survey maintained that they attached much importance to training on the job and that they themselves provided such training. The term 'on-the-job' training' was, however, used in a very wide sense. For example, a printing company stated that the duration of such training for a printer was five to ten years. On the other hand, a gas station indicated that their new employees received on-the-job training for only one day. A gas stove factory mentioned that their employees were sent to short-term training courses.

The survey did not specifically ask if the employers had on their staff any graduates of vocational training institutions. Similarly, employers' views on the job performance of such graduates or on the adequacy of pre-employment training that they had received were not ascertained.

The survey also interviewed a sample of the employees in the establishments that were visited. Information inter alia on their income, education and age was collected. However, since a deliberate weightage to higher levels of education was not given at the time of sampling, the number of workers possessing education beyond P.7 was rather small. Consequently, no attempt was made to use these data to compute rates of return to education.

## 6. Suggestions regarding future surveys and analysis

In the light of the experience gained in this survey, suggestions will not be made concerning the types of information and analysis that would be useful for the planning of training for employment. The task of collection, processing and use of such information would call for effort to be made by a number of organisations. Suggestions will, therefore, also be made as to who could do what.

### Types of information and analysis

The information and analysis needed for a systematic planning of training for employment will be discussed under three broad heads; viz. (I) information about students, graduates and drop-outs; (II) data on costs and benefits and analytic studies based thereon; and (III) job analysis and related information.

#### I. Information about students, graduates and drop-outs

The main purpose of collecting information about students, graduates and drop-outs is to enable training institutions to assess how far the objectives, with which these institutions have been set up, are being actually fulfilled in practice. Obviously, the institutions themselves have to play a major role in collecting and analysing such information. To obtain an adequate sample of students is not so difficult, but a follow-up of graduates and drop-outs, although relatively more complicated, is equally, if not more, important. These two groups of respondents are, therefore, discussed separately. Furthermore, a survey in the nature of a follow-up at the national level, conducted by the National Statistical Office, could also be viewed as providing information about the role of education and training in employment and income acquisition.

a) Information on students' background and aspirations

In order that the objectives with which training institutions have been set up can be fulfilled in practice, it is necessary to select students whose objectives are in harmony with those of the training courses. This is, of course, a very difficult matter, but it is suggested that institutions should try to ascertain from those who apply for admission what it is that they want to achieve and how well they are motivated to be able to do so. If the aspirations of students are found to be very different from the objectives of the courses as prescribed by the official authorities, perhaps a case can be made by the institutions to modify the latter (i.e. the objectives of the courses) so as to make them more realistic. The information about the students' socio-economic background would also enable the Government to assess how far their objective of ensuring equal opportunity of education is being fulfilled.

b) Follow-up of graduates and drop-outs

The biggest contribution that training institutions can make to systematic planning of training for employment is to collect and analyse the information obtainable through a regular follow-up of their graduates and drop-outs.

The information that is presently collected from graduates, through a form that they are asked to fill in and return after a certain period, is usually limited to whether they are employed, unemployed, or engaged in further study. This is obviously inadequate. Information on the type of work that the graduates do is extremely important, to see if they are working in the line of their training. It is also important to know whether they are self-employed, or working for the Government or a private enterprise. Further information on where they are

working - in Bangkok, in other urban areas or in rural areas - and their migration patterns is most valuable. In decision making one would also want to know if the graduates experience any unemployment, and if so, how long that period had been. Questions on their income would also be very useful.

While institutions must know about the employment experience of their graduates, they should also try to keep in touch with the drop-outs. In the latter case, an additional item of useful information would be why the student dropped out of the course, and whether he/she would like to have part-time training.

The degree of response that institutions are able to obtain from their graduates is rather low at present. It might be possible to improve this situation by assigning responsibility to teachers to keep in touch with small groups of students.

Follow-up information should be fed back systematically into the planning process. This will enable suitable modifications to be made in the content of training and also in the distribution of places over different trades.

Most of the suggestions made here have already been mentioned in Report One, Chapter I, section 1.9.4.8, but they are repeated here for ready reference in the context of discussion on the type of information that needs to be collected by institutions from their graduates and drop-outs.

c) Labour force and income surveys at the national level

Although such surveys generally have a wider coverage, and are not confined to students, graduates and drop-outs, they are relevant to the subject under discussion to the extent that they provide information on the employment and income of persons who have been exposed to training in some form or another. By

collecting and analysing data on earnings of workers possessing different levels of education, training and experience, and at different ages, the National Statistical Office could help assess the benefits that the society and the individuals derive from education and training. This is in the nature of a follow-up at the national level.

## II. Data on costs and benefits and analytic studies based thereon

The main purpose of collecting information on costs and benefits and of making analytic studies based thereon is to assess whether the allocation of resources to training institutions of various kinds is justified on the basis of social rates of return, and if not, to enable a re-examination of such allocation.

### A. Costs

In a general way the Ministry controlling training institutions of different types and levels already possesses a good deal of data on current as well as capital costs. A break-down of expenditure according to different heads at the institutional level is also available to a certain extent. However, the available data need to be subjected to refinements before they can be made to present a realistic picture of the cost of training. Furthermore, supplementary surveys also need to be conducted to estimate costs of different combinations of education, training and experience.

#### a) Ministry's data on costs

The budgetary expenditure, both current and capital, is often viewed in relation to the total enrollment of students in different types and levels of education, to estimate the average cost per student. It is suggested

that this procedure may be modified to obtain a more realistic estimate of the unit cost. Firstly, a calculation of the unit cost per successful student should be made by taking into account the percentage of drop-outs and repeaters. Secondly, the unit capital cost should be adjusted by incorporating into the calculations the approximate age of the school buildings constructed through annual budgets. The detailed procedure involved in making these adjustments is given in the study relating to Thailand that Mark Blaug made in 1971.<sup>1/</sup>

b) Institutional data on costs

The types of adjustments suggested in the preceding paragraph could also be applied to the data on costs at the level of the institution. Furthermore, it would be useful for the institutions to take into account the resources allocated to training in different trades. This would enable a more realistic estimate to be made of training costs, both current and capital, per successful student in each trade.

c) Estimation of costs for different combinations of education, training and experience

A comparison of different methods of skill acquisition is useful for policy formulation. This needs inter alia an estimate of cost for different combinations of education, training and experience. This could be accomplished by conducting a survey of workers at the level of the firm jointly by the Labour Department and the employers.

<sup>1/</sup> Mark Blaug: op.cit., Chapter 4.

B. Benefits

From the viewpoint of concepts as well as data collection, benefits derived from training are subject to more difficult problems than are costs. That is why the available information on benefits is so meagre. Some effort has already been made to assess benefits as represented by earnings. This can be extended further to obtain details for each type and level of vocational education. Furthermore, an attempt also needs to be made to assess benefits as represented by the quality of job performance.

a) Rates of return

Rates of return, social as well as private, by type and level of education in Thailand, based on data for the year 1970 were computed by Blaug.<sup>1/</sup> The rates of return from vocational secondary education were found to be lower than those from academic secondary education. It would be useful to have similar studies conducted by research workers at periodic intervals, possibly based on data that would enable separate calculations for different types and levels of training.

b) Comparison of different methods of skill acquisition

Methods of acquiring skill through different combinations of education, training and experience need to be compared on the basis of cost-benefit considerations. If research workers could conduct comparative studies of this type, their results would facilitate the formulation of suitable schemes of training as well as retraining that would minimise costs and at the same time ensure quality of job performance.

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<sup>1/</sup> Mark Blaug: op.cit., Table 21.

### III. Job Analysis and related information

Job analysis and job specification are important tools for establishing a relationship between occupation on the one hand and education and training on the other. More specifically, job analysis is the technique of listing the tasks involved in an occupation, whereas job specification is a list of the skills or abilities required of the person who is to perform the job successfully. If information underlying job analysis and job specification of selected occupations is collected regularly, it would help assess the relevance and adequacy of training being imparted to students who aspire to those occupations.

#### a) Job analysis of selected occupations

Six basic trades dominate Thailand's vocational education system; viz., auto mechanics, welding/sheet metal, construction, electricity, radio/telecommunications, machine-shop. Then there are occupations like tool and die makers and heavy equipment maintenance men that are often viewed as critical. It would be helpful if job analysis of such occupations were conducted systematically. The relevance of industrial experience to vocational school teachers in general, and shop instructors in particular, could also be assessed through job analysis.

This is a task which can be best accomplished through the joint efforts of the Labour Department and the employers.

#### b) Employers' and employees' views

The relevance and adequacy of institutional training can best be assessed by ascertaining the views of employers who hire graduates of such training courses, and also of the employees themselves. Suggestions as to what the institutions can do to

meet the employers' needs, both qualitatively and quantitatively, could emerge from such investigations. The Labour Department seems to be in the best position to handle this.

Role of Different Organisations: Summary Statement

Suggestions made in the preceding paragraphs about the collection, processing and use of information on training for employment would call for an effort to be made by a number of organisations. A summary statement of these suggestions showing who could do what is therefore presented overleaf.

Summary of Suggestions Showing Who Could Do What

S.No.	Agency	Relevant item(s) of information
1.	Training institutions	I (a) Information on students' background and aspirations
		I (b) Follow-up of graduates and drop-outs
		II A(b) Institutional data on costs
		II B(d) Data on earnings
2.	Ministry	II A(a) Ministry's data on costs
3.	National Statistical Office	I (c) Labour force and income surveys at the national level
		II B(d) Data on earnings
4.	Labour Department: a) on its own b) jointly with employers	III (b) Employers' and employees' views
		II A(c) Estimation of costs for different combinations of education, training and experience
		II B(d) Data on earnings
		II B(e) Quality of job performance
		III (a) Job analysis of selected occupations
5.	Research workers	II C(f) Rates of return
		II C(g) Comparison of different methods of skill acquisition

A P P E N D I X

## I N D E X

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Table 1

Future Plans of Students after Graduation

	To work in field of training	To work in any job	Further study	No opinion
	%	%	%	%
<u>Certificate level: MS 4-6</u>				
Government Trade Schools	30	1	67	1
Government Technical Schools	33	-	66	1
Government Girls' Trade Schools	18	12	68	2
Private Commercial and Industrial	40	1	56	3
Agricultural Colleges	29	1	70	-
Technical Institutes	69	1	30	-
<u>Diploma level: grades 1-2, 3-4</u>				
Government Technical Schools	24	-	76	-
Agricultural Colleges	49	5	46	-
Technical Institutes	63	2	35	-
Technical Teachers' Training	70	2	28	-
<u>Short courses: private</u>				
Private Trade Schools	88	1	11	-
Private Commercial Schools	75	7	14	7
<u>Short courses: government</u>				
Adult Vocational Education	68	8	15	9
Mobile Trade Training Schools	70	8	16	6
Polytechnic Schools	68	6	22	4

Table 2

Type of Employment Desired by Students

	Government	State	Private	Self-	No
	ment	enter-	company	employed	opinion
		prise			
<u>Certificate level: MS 4-6</u>					
	%	%	%	%	%
Government Trade Schools	72	6	16	6	-
Government Technical Schools	47	19	24	10	-
Government Girls' Trade Schools	78	3	7	12	-
Private Commercial and Industrial	62	8	24	5	1
Agricultural Colleges	67	5	8	20	-
Technical Institutes	57	10	28	5	-
<u>Diploma level: grades 1-2. 3-4</u>					
Government Technical Schools	9	48	29	14	-
Agricultural Colleges	68	8	3	21	-
Technical Institutes	67	7	22	4	-
Technical Teachers' Training	71	16	5	8	-
<u>Short courses: private</u>					
Private Trade Schools	4	-	18	76	2
Private Commercial Schools	50	14	25	11	-
<u>Short courses: government</u>					
Adult Vocational Education	19	4	17	54	6
Mobile Trade Training Schools	20	1	31	47	1
Polytechnic Schools	20	5	28	47	-

Table 3

Type of Job Expected by Students After Graduation

	Clerical job	Other office	Fore- man	Super- visor	Skilled worker	Other
<u>Certificate level: MS 4-6</u>	%	%	%	%	%	%
Government Trade Schools	2	9	17	42	28	2
Government Technical Schools	1	1	19	34	45	-
Government Girls' Trade Schools	2	19	9	16	34	20
Private Commercial and Industrial	25	20	10	22	20	3
Agricultural Colleges	14	11	11	20	37	7
Technical Institutes	4	6	15	30	43	2
 <u>Diploma level: grades 1-2, 3-4</u>						
Government Technical Schools	-	-	19	43	38	-
Agricultural Colleges	-	21	17	22	40	-
Technical Institutes	1	21	14	39	23	2
Technical Teachers' Training	11	2	20	28	39	-
 <u>Short courses: private</u>						
Private Trade Schools	3	6	-	7	84	-
Private Commercial Schools	-	4	-	4	79	13
 <u>Short courses: government</u>						
Adult Vocational Education	13	1	4	4	71	7
Mobile Trade Training Schools	2	-	5	3	84	6
Polytechnic Schools	8	5	4	6	71	6

Table 4

Place of Work Desired by Students

	Bangkok	Big city	Hometown	No idea
<u>Certificate level: MS 4-6</u>	%	%	%	%
Government Trade Schools	43	14	39	4
Government Technical Schools	16	44	39	1
Government Girls' Trade Schools	62	20	34	-
Private Commercial and Industrial	56	15	26	3
Agricultural Colleges	5	41	50	4
Technical Institutes	33	30	35	2
<u>Diploma level: grades 1-2, 3-4</u>				
Government Technical Schools	28	48	24	-
Agricultural Colleges	10	38	52	-
Technical Institutes	38	36	25	1
Technical Teachers' Training	34	28	38	-
<u>Short courses: private</u>				
Private Trade Schools	44	14	42	-
Private Commercial Schools	7	43	50	-
<u>Short courses: government</u>				
Adult Vocational Education	6	19	69	6
Mobile Trade Training Schools	10	22	65	3
Polytechnic Schools	65	7	27	1

Table 5

Criteria Used for Admitting Students

	Only previous educational attainment	Written entrance exam. (1)	Apti- tude test (2)	Inter- view (3)	Combination of			
					1+2	1+3	2+3	1+2+3
<u>Certificate level: MS 4-6</u>								
Government Trade Schools	-	1	-	-	2	1	-	2
Government Technical Schools	-	-	-	-	1	-	-	1
Government Girls' Trade Schools	-	1	-	-	-	1	-	-
Private Commercial and Industrial	3	-	-	2	-	-	1	1
Agricultural Colleges	-	-	-	-	-	3	-	1
Technical Institutes	-	-	-	-	-	2	-	1
<u>Diploma level: grades 1-2,3-4</u>								
Government Technical Schools (a)								
Agricultural Colleges (a)								
Technical Institutes (a)								
Technical Teachers' Training	-	-	-	-	1	-	-	-
<u>Short courses: private</u>								
Private Trade Schools	-	-	-	8	-	-	-	-
Private Commercial Schools	1	-	-	3	-	-	-	-
<u>Short courses: government</u>								
Adult Vocational Education	-	-	-	8	-	-	-	-
Mobile Trade Training Schools	-	-	-	8	-	-	-	-
Polytechnic Schools	-	-	-	3	-	-	-	-

(a) Same as above.

Table 6

Composition of Curriculum and its Correspondence  
with the Needs of the Labour Market

	<u>Composition of curriculum</u>		Curriculum corresponds with needs of labour market	Curriculum does not correspond with needs of labour market
	<u>%</u> Theoretical	<u>%</u> Practical		
<u>Certificate level: MS.4-6</u>				
Government Trade Schools	58	42	-	6
Government Technical Schools	48	52	1	1
Government Girls' Trade Schools	50	50	2	-
Private Commercial and Industrial	60	40	7	-
Agricultural Colleges	65	35	2	2
Technical Institutes	50	50	3	-
<u>Diploma level: grades 1-2, 3-4</u>				
Government Technical Schools	48	52	1	1
Agricultural Colleges	65	35	2	2
Technical Institutes	50	50	3	-
Technical Teachers' Training	n.a.	n.a.	n.a.	n.a.
<u>Short courses: private</u>				
Private Trade Schools	37	63	7	1
Private Commercial Schools	33	67	4	-
<u>Short courses: government</u>				
Adult Vocational Education	40	60	2	6
Mobile Trade Training Schools	32	68	6	2
Polytechnic Schools	25	75	3	-

Table 7

Qualification of Teacher and Training Instructors

	Bachelor degree or higher	Higher technical teachers' certi- ficate	Higher diploma in technical fields	Higher voca- tional certi- ficate	Secondary vocational certi- ficate	Other
<u>Certificate level: MS.4-6</u>						
Government Trade Schools	% 17	% 16	% 13	% 13	% 5	% 36
Government Technical Schools	28	24	29	1	4	14
Government Girls' Trade Schools	26	2	44	13	-	15
Private Commercial and Industrial	51	8	13	4	-	24
Agricultural Colleges	61	24	9	2	-	4
Technical Institutes	45	33	16	1	-	5
<u>Diploma level: grades 1-2, 3-4</u>						
Government Technical Schools		(a)				
Agricultural Colleges		(a)				
Technical Institutes		(a)				
Technical Teachers' Training	47	23	15	13	-	2
<u>Short courses: private</u>						
Private Trade Schools	-	-	-	-	-	190
Private Commercial Schools	27	-	-	27	9	37
<u>Short courses: government</u>						
Adult Vocational Education	5	5	35	20	25	10
Mobile Trade Training Schools	-	6	78	4	-	12
Polytechnic Schools	4	44	32	7	-	13

(a) Same as above.

Table 8

Headmasters' Opinion of the Training Equipment

	<u>Availability of equipment</u>			<u>Utilisation of equipment</u>		
	Suffi- cient	More than suffi- cient	Not suffi- cient	Adequately utilised	Over utilised	Under utilised
<u>Certificate level: MS 4-6</u>	%	%	%	%	%	%
Government Trade Schools	67	-	33	83	-	17
Government Technical Schools	100	-	-	100	-	-
Government Girls' Trade Schools	50	-	50	100	-	-
Private Commercial and Industrial	71	-	29	85	-	15
Agricultural Colleges	50	-	50	50	25	25
Technical Institutes	-	-	100	33	33	34
 <u>Diploma level: grades 1-2, 3-4</u>						
Government Technical Schools	(a)					
Agricultural Colleges	(a)					
Technical Institutes	(a)					
Technical Teachers' Training	100	-	-	100	-	-
 <u>Short courses: private</u>						
Private Trade Schools	100	-	-	100	-	-
Private Commercial Schools	100	-	-	100	-	-
 <u>Short courses: government</u>						
Adult Vocational Education	13	-	88	75	25	-
Mobile Trade Training Schools	50	-	50	63	37	-
Polytechnic Schools	67	-	33	67	33	-

(a) Same as above

Table 9

Summary Table of Enrollment Rate of Graduates,  
Repeaters and Drop-outs for the Years 1970 and 1971

	<u>Total enrollment</u>		<u>Graduates</u>		<u>Repeaters</u>		<u>Drop-outs</u>	
	1970	1971	1970	1971	1970	1971	1970	1971
<u>Certificate level: MS 4-6</u>	%	%	%	%	%	%	%	%
Government Trade Schools	100	100	84	80	8	13	8	7
Government Technical Schools	100	100	97	94	-	-	3	6
Government Girls' Trade Schools	100	100	70	73	9	5	21	22
Private Commercial and Industrial	100	100	93	76	3	10	4	14
Agricultural Colleges	100	100	93	96	-	1	7	3
Technical Institutes	100	100	98	76	2	24	-	-
 <u>Diploma level: grades 1-2, 3-4</u>								
Government Technical Schools (a)								
Agricultural Colleges (a)								
Technical Institutes (a)								
Technical Teachers' Training	100	100	89	86	5	6	6	9
 <u>Short courses: private</u>								
Private Trade Schools	100	100	76	62	6	4	18	32
Private Commercial Schools	100	100	77	90	5	2	18	8
 <u>Short courses: government</u>								
Adult Vocational Education	100	100	81	74	5	4	14	22
Mobile Trade Training Schools	100	100	67	65	-	-	33	35
Polytechnic Schools	100	100	65	70	-	-	35	30

(a) Included above

Table 10

Students' Opinion of the Availability  
of Teachers, Equipment and Material

	<u>Teachers</u>		<u>Equipment</u>		<u>Material</u>	
	Suffi- cient	Not suffi- cient	Suffi- cient	Not suffi- cient	Suffi- cient	Not suffi- cient
<u>Certificate level: MS 4-6</u>	%	%	%	%	%	%
Government Trade Schools	53	47	62	38	75	25
Government Technical Schools	57	43	74	26	80	20
Government Girls' Trade Schools	73	27	58	42	77	23
Private Commercial and Industrial	77	23	70	30	88	14
Agricultural Colleges	43	57	33	67	55	45
Technical Institutes	77	23	69	31	85	15
 <u>Diploma level: grades 1-2, 3-4</u>						
Government Technical Schools	57	43	72	28	86	14
Agricultural Colleges	21	79	6	94	28	72
Technical Institutes	57	43	56	44	83	17
Technical Teachers' Training	67	33	93	7	95	5
 <u>Short courses: private</u>						
Private Trade Schools	96	4	89	11	87	13
Private Commercial Schools	89	11	89	11	100	-
 <u>Short courses: government</u>						
Adult Vocational Education	74	26	63	37	76	24
Mobile Trade Training Schools	90	10	73	27	82	18
Polytechnic Schools	94	6	82	18	84	16

Table 11

Reasons for Drop-outs to Leave the School

	Failed to pass exam.	No money to support oneself	Violated school regula- tions	Want to help parents working	Want to study in academic stream	Training not necessary for work	Want to work to get income	Other
<u>Certificate level: MS 4-6</u>								
Government Trade Schools	11	39	9	5	7	-	18	11
Government Technical Schools	78	-	-	-	11	-	-	11
Government Girls' Trade Schools	5	19	-	-	21	-	33	22
Private Commercial and Industrial	5	17	-	6	6	-	34	32
Agricultural Colleges	28	24	11	6	11	-	11	9
Technical Institutes	63	6	1	1	3	-	17	9
<u>Diploma level: grades 1-2, 3-4</u>								
Government Technical Schools	-	-	-	-	100	-	-	-
Agricultural Colleges	20	20	-	-	-	-	60	-
Technical Institutes	42	10	-	-	-	-	19	29
Technical Teachers' Training	40	20	-	-	-	-	40	-
<u>Short courses: private</u>								
Private Trade Schools	9	50	-	25	8	-	-	8
Private Commercial Schools	-	-	-	-	-	-	-	-
<u>Short courses: government</u>								
Adult Vocational Education	-	42	-	21	-	-	21	16
Mobile Trade Training Schools	3	31	-	9	6	-	24	27
Polytechnic Schools	5	30	-	12	-	2	26	20

Table 12

Drop-outs who Want to go Back to School

	Percentage of drop-outs who want to go back to school	Types of course preferred by drop-outs who want to go back to school			Subject preferred		
		Full-day course	Evening course	Part-time course	Same as before	Not same as before	No reply
<u>Certificate level: MS 4-6</u>							
	%	%	%	%	%	%	%
Government Trade Schools	84	30	68	2	16	70	14
Government Technical Schools	100	44	56	-	44	56	-
Government Girls' Trade Schools	83	38	50	12	16	67	17
Private Commercial and Industrial	86	22	66	12	13	75	12
Agricultural Colleges	84	39	50	11	50	37	13
Technical Institutes	91	44	45	11	54	44	2
<u>Diploma level: grades 1-2, 3-4</u>							
Government Technical Schools	100	-	-	100	100	-	-
Agricultural Colleges	100	80	20	-	80	20	-
Technical Institutes	84	27	58	15	65	35	-
Technical Teachers' Training	100	-	83	17	33	67	-
<u>Short courses: private</u>							
Private Trade Schools	91	50	40	10	40	60	-
Private Commercial Schools	-	-	-	-	-	-	-
<u>Short courses: government</u>							
Adult Vocational Education	95	28	72	-	61	33	6
Mobile Trade Training Schools	90	25	56	19	32	55	13
Polytechnic Schools	88	15	67	18	45	42	13

Table 13

Employment Status of All Graduates

	<u>Employed</u>	<u>Unemployed</u>	<u>Studying</u>
<u>Certificate level: MS 4-6</u>	%	%	%
Government Trade Schools	40	18	42
Government Technical Schools	40	12	48
Government Girls' Trade Schools	39	19	42
Private Commercial and Industrial	58	25	17
Agricultural Colleges	46	23	31
Technical Institutes	41	13	46
<u>Diploma level: grades 1-2, 3-4</u>			
Government Technical Schools	25	-	76
Agricultural Colleges	50	19	25
Technical Institutes	76	13	11
Technical Teachers' Training	100	-	-
<u>Short courses: private</u>			
Private Trade Schools	51	47	2
Private Commercial Schools	47	47	6
<u>Short courses: government</u>			
Adult Vocational Education	32	61	7
Mobile Trade Training Schools	39	51	10
Polytechnic Schools	39	43	18

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Table 4

Employment Status of Graduates by Year of Graduation

	<u>1969</u>			<u>1970</u>			<u>1971</u>			<u>1972</u>		
	E	U	S	E	U	S	E	U	S	E	U	S
<u>Certificate level: MS 4-6</u>												
Government Trade Schools	100	-	-	60	20	20	29	24	47	29	18	53
Government Technical Schools	-	-	100	39	23	38	33	17	50	58	-	42
Government Girls' Trade Schools	100	-	-	57	14	29	-	33	67	50	14	36
Private Commercial and Industrial	59	23	18	59	23	18	67	33	-	46	36	18
Agricultural Colleges	100	-	-	78	22	-	33	34	33	35	24	41
Technical Institutes	100	-	-	31	15	54	33	-	67	41	29	30
<u>Diploma level: grades 1-2, 3-4</u>												
Government Technical Schools	-	-	-	-	-	-	-	-	-	25	-	75
Agricultural Colleges	100	-	-	94	6	-	76	14	10	50	25	25
Technical Teachers' Training	-	-	-	-	-	-	-	-	-	100	-	-
<u>Short courses: private</u>												
Private Trade Schools	88	12	-	50	50	-	48	52	-	17	67	16
Private Commercial Schools	100	-	-	20	80	-	61	35	4	40	47	13
<u>Short courses: government</u>												
Adult Vocational Education	-	-	-	40	40	20	38	50	12	28	72	-
Mobile Trade Training Schools	62	38	-	55	35	10	30	60	10	36	52	12
Polytechnic Schools	43	36	41	50	30	20	50	35	15	33	50	17

E = Employed

U = Unemployed

S = Studying

Table 15

Employment Status of those Graduates who  
Entered the Labour Market

	Salaried employed	Self employed	Unemployed
<u>Certificate level: MS 4-6</u>	%	%	%
Government Trade Schools	60	9	31
Government Technical Schools	67	9	24
Government Girls' Trade Schools	39	28	33
Private Commercial and Industrial	67	3	30
Agricultural Colleges	67	-	33
Technical Institutes	68	7	25
 <u>Diploma level: grades 1-2,p3-4</u>			
Government Technical Schools	100	-	-
Agricultural Colleges	75	-	25
Technical Institutes	77	8	15
Technical Teachers' Training	100	-	-
 <u>Short courses: private</u>			
Private Trade Schools	30	22	48
Private Commercial Schools	46	4	50
 <u>Short courses: government</u>			
Adult Vocational Education	10	24	66
Mobile Trade Training Schools	23	21	56
Polytechnic Schools	29	18	53

Table 16

Field of Training and Employment Status of  
Graduates of Government Technical Schools

	Certificate level			Diploma level		
	E	U	S	E	U	S
Automechanics	4	1	3	-	-	-
Electricity	3	1	3	-	-	1
Construction	3	1		-	-	-
Industrial plumbing	-	-	3	-	-	-
Machine designing	1	-	2	-	-	-
Machinshop mechanic	2	1	6	1	-	2
Radio	3	-	1	-	-	-
Welding	-	1	1	-	-	-
	<u>16</u>	<u>5</u>	<u>19</u>	<u>1</u>	<u>-</u>	<u>3</u>

E = Employed

U = Unemployed

S = Studying

Table 17

Field of Training and Employment Status of  
Graduates of Girls' Trade Schools

<u>Subject</u>	E	U	S
Home Economics	5	4	5
Clothing	2	1	3
Commerce	1	-	-
Handicrafts	-	1	-
Foods and Nutrition	4	-	5
	<u>12</u>	<u>6</u>	<u>13</u>

E = Employed

U = Unemployed

S = Studying

Table 18

Field of Training and Employment Status of  
Graduates of Private Commercial Schools

<u>Subject</u>	E	U	S
Accountancy	28	11	7
Commerce	15	10	6
Secretary	5	-	1
	<u>48</u>	<u>21</u>	<u>14</u>

E = Employed

U = Unemployed

S = Studying

Table 19

Field of Training and Employment Status of  
Graduates of Technical Institutes

	Certificate level			Diploma level		
	E	U	S	E	U	S
Architecture	-	-	-	1	1	1
Automechanic	4	-	1	6	1	1
Agricultural mechanics	-	-	-	3	-	1
Accountancy	1	-	1	8	-	-
Business administration	2	-	1	3	-	-
Commerce	3	-	11	-	-	-
Carpentry	1	-	1	-	-	-
Construction	4	2	3	12	3	1
Civil Engineering	-	-	-	1	-	-
Electricity	1	-	1	-	1	-
Electric power	-	2	-	1	-	-
Electronics	-	-	1	3	1	-
Home economics	3	1	1	9	1	3
Machine design	-	-	-	1	-	-
Metal technology	-	-	3	3	1	-
Secretarial course	2	-	-	3	-	-
Welding	-	1	-			
Teachers' Training	-	-	-	2	1	1

E = Employed

U = Unemployed

S = Studying

Table 20

Field of Training and Employment Status of

Graduates of Short Courses

	Private Trade Schools			Private Commercial Schools			Adult Vocational Education			Mobile Trade Training Schools			Polytechnic Schools		
	E	U	S	E	U	S	E	U	S	E	U	S	E	U	S
Automechanics	7	10	-	-	-	-	-	-	-	14	18	3	8	8	3
Autodriving	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Electricity	-	1	-	-	-	-	-	-	-	8	11	1	-	3	-
Electronics	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Auto-repair	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-
Workshop-mechanics	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
Welding	-	-	-	-	-	-	-	-	-	5	13	1	-	2	-
Radio repair	-	-	-	-	-	-	-	-	-	11	15	6	6	7	-
Photography	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2
Home economics	-	-	-	-	-	-	-	-	-	3	10	2	-	1	-
Accountancy	-	-	-	17	18	1	-	-	-	7	3	2	6	7	6
Commerce	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Typing	-	-	-	5	4	1	-	-	-	3	3	1	1	4	5
Accountancy & typing	-	-	-	1	1	1	-	-	-	5	1	-	-	-	-
Dressmaking	13	6	-	-	-	-	8	16	2	18	27	6	20	18	9
Beautician & Hairdressing	6	5	1	-	-	-	2	3	-	9	11	1	11	11	1
Tailoring	-	-	-	-	-	-	-	-	-	12	12	2	3	4	2
Barbering	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Shorthand-writing	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
	28	26	1	23	23	3	10	19	2	97	124	25	61	68	28

E = Employed  
 U = Unemployed  
 S = Studying

Table 21

Type of Establishment Where Graduates were Employed

	Government	Private company	School	Self Employed	No answer
<u>Certificate level: MS 4-6</u>					
	%	%	%	%	%
Government Trade Schools	59	8	12	13	8
Government Technical Schools	56	19	12	13	-
Government Girls' Trade Schools	17	-	33	42	8
Private Commercial and Industrial	34	54	6	4	2
Agricultural Colleges	21	25	50	-	4
Technical Institutes	19	29	43	9	-
 <u>Diploma level: grades 1-2, 3-4</u>					
Government Technical Schools	-	100	-	-	-
Agricultural Colleges	7	6	80	-	6
Technical Institutes	25	32	32	9	2
Technical Teachers' Training	6	6	88	-	-
 <u>Short courses: private</u>					
Private Trade Schools	7	50	-	43	-
Private Commercial Schools	26	61	4	9	-
 <u>Short courses: government</u>					
Adult Vocational Education	-	30	-	70	-
Mobile Trade Training Schools	9	30	5	49	7
Polytechnic Schools	2	49	3	39	7

Table 22

Type of Job of Employed Graduates

	Clerical	Foreman	Super- visor	Skilled worker	Semi- skilled	Un- skilled	Teacher	Self- employed
<u>Certificate level: MS 4-6</u>								
	%	%	%	%	%	%	%	%
Government Trade Schools	4	-	21	17	25	8	12	13
Government Technical Schools	6	13	6	44	6	6	6	13
Government Girls' Trade Schools	-	-	-	-	25	-	33	42
Private Commercial and Industrial	40	-	2	44	4	2	4	4
Agricultural Schools	21	4	21	11	-	7	36	-
Technical Institutes	10	-	9	33	5	-	33	10
<u>Diploma level: grades 1-2, 3-4</u>								
Government Technical Schools	-	-	-	100	-	-	-	-
Agricultural Colleges	-	6	-	13	-	-	80	-
Technical Institutes	9	9	21	23	4	2	23	9
Technical Teachers' Training	-	20	-	-	13	-	67	-
<u>Short courses: private</u>								
Private Trade Schools	3	-	-	29	18	11	-	39
Private Commercial Schools	27	-	-	41	5	14	4	9
<u>Short courses: government</u>								
Adult Vocational Education	10	-	-	-	10	20	-	60
Mobile Trade Training Schools	7	1	2	20	7	11	3	49
Polytechnic Schools	13	-	5	23	12	8	-	39

Table 23

Comparison of Study Field and Work Field of Employed Graduates

	Employed in the field of training	Not employed in the field of training	Teacher	Answer not clear
	%	%	%	%
<u>Certificate level: MS 4-6</u>				
Government Trade Schools	66	18	12	4
Government Technical Schools	62	32	6	-
Government Girls' Trade Schools	34	25	33	8
Private Commercial and Industrial	73	17	4	6
Agricultural Colleges	18	36	46	-
Technical Institutes	57	-	43	-
<u>Diploma level: grades 1-2, 3-4</u>				
Government Technical Schools	-	100	-	-
Agricultural Colleges	60	7	33	-
Technical Institutes	55	9	22	14
Technical Teachers' Training	88	12	-	-
<u>Short courses: private</u>				
Private Trade Schools	75	25	-	-
Private Commercial Schools	52	48	-	-
<u>Short courses: government</u>				
Adult Vocational Education	40	60	-	-
Mobile Trade Training Schools	67	19	-	7
Polytechnic Schools	64	30	-	6

Table 24

How Employed Graduates have Profited from the  
Training Obtained in their Present Jobs

	<u>Job in related field</u>		<u>Job in unrelated field</u>	
	Very much	Very little	Very much	Very little
<u>Certificate level: MS 4-6</u>	%	%	%	%
Government Trade Schools	62	4	17	17
Government Technical Schools	50	12	19	19
Government Girls' Trade Schools	25	8	42	25
Private Commercial and Industrial	65	8	18	9
Agricultural Colleges	14	4	61	21
Technical Institutes	43	14	31	12
 <u>Diploma level: grades 1-2, 3-4</u>				
Government Technical Schools	-	-	-	100
Agricultural Colleges	53	7	30	10
Technical Institutes	52	4	35	9
Technical Teachers' Training	80	8	12	-
 <u>Short courses: private</u>				
Private Trade Schools	68	7	11	14
Private Commercial Schools	35	17	27	21
 <u>Short courses: government</u>				
Adult Vocational Education	20	20	24	36
Mobile Trade Training Schools	58	9	24	9
Polytechnic Schools	56	8	22	14

Table 25

Additional Training of Employed Graduates

	Percentage who had additional training before working	Type of additional training after graduation			
		Short course	On- the job	Evening course	Appren- tice
<u>Certificate level: MS 4-6</u>					
	%	%	%	%	%
Government Trade Schools	21	100	-	-	-
Government Technical Schools	18	67	33	-	-
Government Girls' Trade Schools	33	50	25	25	-
Private Commercial and Industrial	29	29	57	14	-
Agricultural Colleges	54	80	20	-	-
Technical Institutes	34	86	14	-	-
<u>Diploma level: grades 1-2, 3-4</u>					
Government Technical Schools	-	-	-	-	-
Agricultural Colleges	33	80	20	-	-
Technical Institutes	41	57	26	17	-
Technical Teachers' Training	35	33	67	-	-
<u>Short courses: private</u>					
Private Trade Schools	21	50	50	-	-
Private Commercial Schools	39	56	44	-	-
<u>Short courses: government</u>					
Adult Vocational Education	10	-	100	-	-
Mobile Trade Training Schools	20	47	42	-	11
Polytechnic Schools	33	60	30	-	10

Table 26

Comparisons of Expected and Earned Income (in \$) for

Different Kinds of Jobs

Government Trade Schools

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
Skilled craftsman	1,500	1,000	940	400
Foreman	1,540	-	1,000	1,000
Supervisor	1,425	1,000	1,000	-
Teacher	1,000	1,000	-	650
Clerical	1,370	-	-	650
Semi-skilled	-	685	-	-
Unskilled	-	700	-	485
Self-employed	1,300	1,000	-	825

Table 27

Comparisons of Expected and Earned Income for

Different Kinds of Jobs

Government Technical Schools

Certificate level: MS 4-6

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
Skilled craftsman	1,350	1,130	1,000	-
Foreman	1,560	1,000	1,000	-
Supervisor	1,490	1,000	1,000	-
Teacher	-	1,000	-	-
Clerical	2,125	650	-	-
Semi-skilled	-	400	-	-
Unskilled	-	1,000	-	-
Self-employed	1,880	400	-	-

Table 28

Comparisons of Expected and Earned Income (\$) for

Different Kinds of Jobs

Government Girls' Trade Schools

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
Skilled craftsman	860	-	650	-
Foreman	1,860	-	1,125	-
Supervisor	1,535	-	1,000	-
Teacher	970	765	1,000	720
Clerical	1,210	-	650	770
Semi-skilled	-	570	-	-
Unskilled	-	-	-	770
Self-employed	1,535	825	1,200	825

Table 29

Comparisons of Expected and Earned Income (B) for  
Different Kinds of Jobs

Private Commercial and Industrial

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
Skilled craftsman	1,225	915	1,000	-
Foreman	1,280	-	1,000	-
Supervisor	1,275	825	-	-
Teacher	1,300	825	-	400
Clerical	1,230	895	1,000	790
Semi-skilled	-	400	-	650
Unskilled	-	1,000	-	685
Self-employed	1,350	1,000	-	1,000

Table 30

Comparisons of Expected and Earned Income (B) for  
Different Kinds of Jobs

Agricultural Colleges

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
<u>Certificate level: MS 4-6</u>				
Skilled craftsman	1,460	970	915	-
Foreman	1,390	1,000	1,000	-
Supervisor	1,600	825	1,060	1,150
Teacher	850	795	1,000	650
Clerical	1,450	1,000	1,000	525
Semi-skilled	-	-	-	-
Unskilled	-	825	-	650
Self-employed	1,925	-	-	825
<u>Diploma level: grades 1-2</u>				
Skilled craftsman	1,540	1,000	1,000	-
Foreman	1,680	1,000	-	-
Supervisor	1,900	1,125	1,060	-
Teacher	1,250	1,000	-	1,000
Clerical	1,750	-	-	-
Semi-skilled	-	-	-	-
Unskilled	-	-	-	-
Self-employed	2,150	-	-	-

Table 31

Comparisons of Expected and Earned Income (in \$) for

Different Kinds of Jobs

Technical Institutes

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
<u>Certificate level: MS 4-6</u>				
Skilled craftsman	1,130	870	1,000	930
Foreman	1,400	-	1,000	-
Supervisor	1,260	1,250	1,000	-
Teacher	1,250	1,035	-	-
Clerical	1,095	825	-	690
Semi-skilled	-	1,000	-	-
Unskilled	-	-	-	400
Self-employed	1,420	650	-	-
<u>Diploma level: grades 1-2</u>				
Skilled craftsman	1,440	1,200	1,060	-
Foreman	1,360	1,000	1,000	1,000
Supervisor	1,370	1,100	1,085	-
Teacher	1,250	950	1,000	650
Clerical	1,400	1,050	-	825
Semi-skilled	-	1,000	-	1,250
Unskilled	-	1,000	-	400
Self-employed	1,835	770	-	-

Table 32

Comparisons of Expected and Earned Income (Bt) for

Different Kinds of Jobs

Mobile Trade Training Schools

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
Skilled craftsman	660	615	620	850
Foreman	1,385	-	1,015	-
Supervisor	1,000	800	660	650
Teacher	1,250	400	-	710
Clerical	785	650	-	785
Semi-skilled	-	410	-	405
Unskilled	-	475	-	530
Self-employed	710	440	-	525

Table 33

Comparisons of Expected and Earned Income (B) for

Different Kinds of Jobs

Polytechnic Schools

Type of job	Expected income by students	Earned income by graduates	Expected income by unemployed graduates	Earned income by drop-outs
Skilled craftsman	875	535	685	810
Foreman	1,275	-	1,000	885
Supervisor	1,470	800	885	1,170
Teacher	-	1,250	400	825
Clerical	795	785	650	825
Semi-skilled	-	515	-	490
Unskilled	-	360	-	405
Self-employed	920	550	-	610

Table 34

Comparison of Expected and Earned Income (RM) for  
Self-employed from Mobile Trade Training Schools  
and Polytechnic Schools

	Mobile Trade Training Schools			Polytechnic Schools		
	Income expected by students	Income earned by graduates	Income earned by drop-outs	Income expected by students	Income earned by graduates	Income earned by drop-outs
Dressmaking	515	400	540	730	540	1,250
Hairdressing/ cosmetics	990	325	525	930	340	485
Barbering	800	250	250	690	-	-
Tailoring	550	390	760	1,050	325	650
Food and nutrition	750	250	750	600	-	-
Typing	1,400	-	-	-	-	-
Accounting	-	740	0	1,315	-	-
Automechanics	985	570	400	1,690	650	-
Electricity	900	435	350	1,590	-	-
Radio and T.V.repair	1,140	610	250	1,160	1,250	-
Carpentry	-	-	400	-	-	-
Welding	725	-	400	-	-	-
Bookkeeping	-	-	825	-	-	-
Music	-	-	-	600	-	-
Photography	-	-	-	-	1,250	-

Table 35

Unemployment Period for Graduates Before Getting a Job

	<u>Months</u>					More than 24
	Less than 5	6-10	11-15	16-20	21-24	
<u>Certificate level: MS 4-6</u>	%	%	%	%	%	%
Government Trade Schools	-	70	10	10	10	-
Government Technical Schools	20	40	20	-	20	-
Government Girls' Trade Schools	33	33	34	-	-	-
Private Commercial and Industrial	50	-	21	22	7	-
Agricultural Colleges	8	69	-	23	-	-
Technical Institutes	14	72	14	-	-	-
 <u>Diploma level: grades 1-2, 3-4</u>						
Government Technical Schools	-	-	-	-	-	-
Agricultural Colleges	-	100	-	-	-	-
Technical Institutes	50	40	10	-	-	-
Technical Teachers' Training	-	-	-	-	-	-
 <u>Short courses: private</u>						
Private Trade Schools	38	31	19	-	8	4
Private Commercial Schools	22	13	35	9	9	12
 <u>Short courses: government</u>						
Adult Vocational Education	5	64	26	-	-	5
Mobile Trade Training Schools	25	36	19	6	9	5
Polytechnic Schools	61	20	12	4	-	3

Table 36

Reasons for Graduates' Unemployment Before Getting a Job

	No job available	Did not want to work at that time	Other
	%	%	%
<u>Certificate level: MS 4-6</u>			
Government Trade Schools	70	20	10
Government Technical Schools	86	14	
Government Girls' Trade Schools	25	-	75
Private Commercial and Industrial	86	7	7
Agricultural Colleges	56	13	31
Technical Institutes	70	-	30
<u>Diploma level: grades 1-2, 3-4</u>			
Government Technical Schools	100	-	-
Agricultural Colleges	100	-	-
Technical Institutes	71	12	17
Technical Teachers' Training	100	-	-
<u>Short courses: private</u>			
Private Trade Schools	80	20	-
Private Commercial Schools	90	-	10
<u>Short courses: government</u>			
Adult Vocational Education	75	25	-
Mobile Trade Training Schools	78	22	-
Polytechnic Schools	67	13	20

Table 37

Reasons for Graduates' Unemployment  
at the Time of the Survey

	No job available	Job available but low income	Job available but not in field of training	Other
	%	%	%	%
<u>Certificate level: MS 4-6</u>				
Government Trade Schools	82	-	18	-
Government Technical Schools	60	-	40	-
Government Girls' Trade Schools	67	-	33	-
Private Commercial and Industrial	76	9	9	6
Agricultural Colleges	57	-	36	7
Technical Institutes	43	-	57	-
<u>Diploma level: grades 1-2, 3-4</u>				
Government Technical Schools	-	-	-	-
Agricultural Colleges	20	-	60	20
Technical Institutes	70	10	20	-
Technical Teachers' Training	-	-	-	-
<u>Short courses: private</u>				
Private Trade Schools	66	19	15	-
Private Commercial Schools	61	13	26	-
<u>Short courses: government</u>				
Adult Vocational Education	90	10	-	-
Mobile Trade Training Schools	60	11	27	2
Polytechnic Schools	69	10	19	2