

EVALUATION REPORT ON THE TECHNICAL
ASSISTANCE OF JICA TO THE TECHNICAL
TRAINING CENTERS OF BANGLADESH

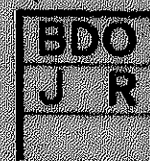
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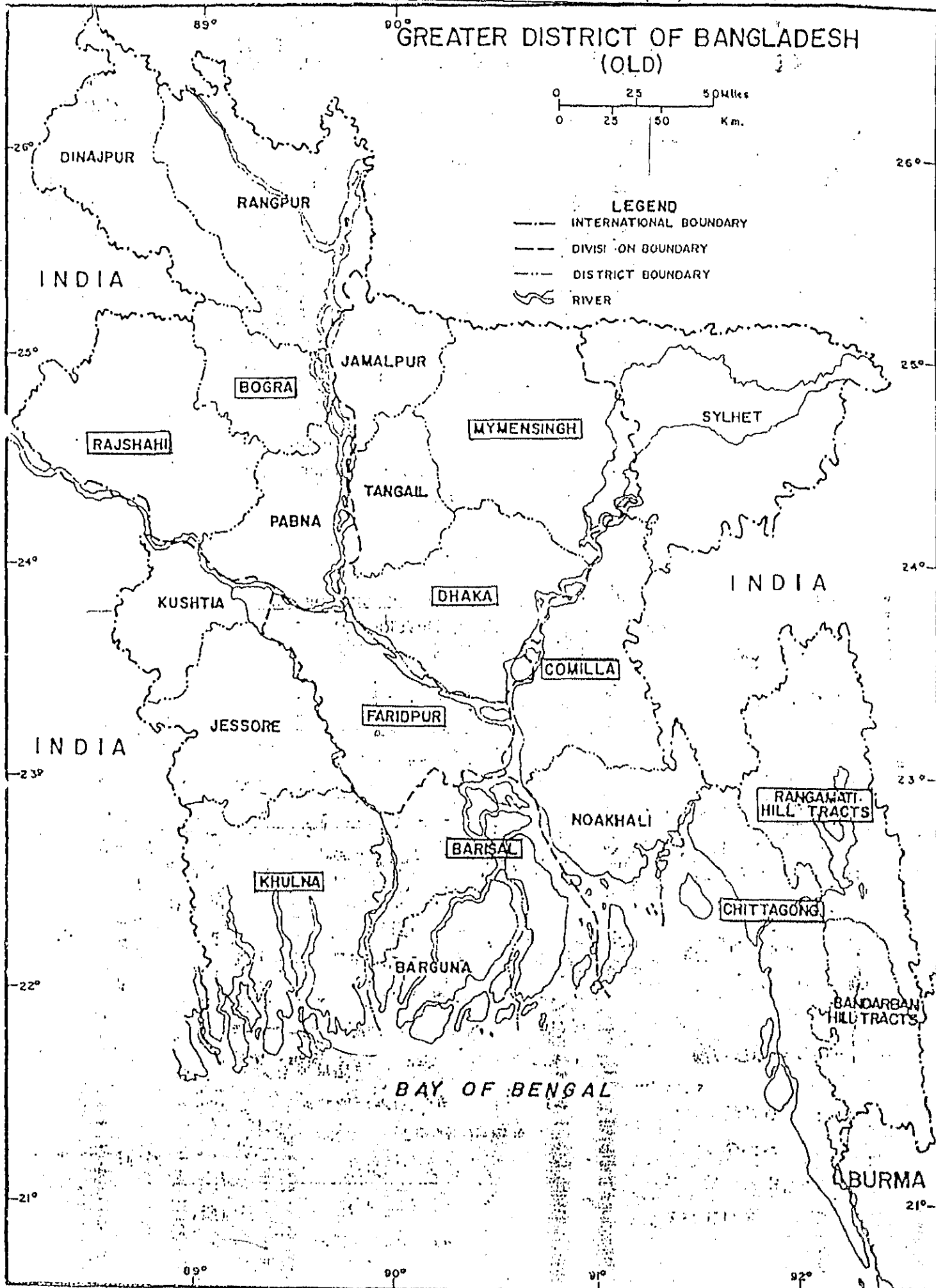
MARCH, 1994



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LOCATIONS OF TECHNICAL TRAINING CENTRES (TTC)

GREATER DISTRICT OF BANGLADESH (OLD)





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EXECUTIVE SUMMARY

1. JICA's involvement through the dispatchment of JOCVs to different Technical Training Centers of Bangladesh has started from 1973. JOCVs are providing both technical and material assistance to different Technical Training Centers (TTCs) which have primarily two inter-dependent components, (a) Dispatchment of Japan Overseas Cooperation Volunteers (JOCVs), and (b) Providing TTCs with equipments and machineries.
2. Realizing the needs and importance of technical education and training of semi-skilled and skilled manpower the first Technical Training Center under the Directorate of Labour was established in Dhaka during the period of Second World War. During 1960-s four Technical Training Centers were established with modern institutional facilities. Out of these four, two are in Dhaka (Mirpur TTC - 1963 and Bangla-German TTC - 1968), one in Chittagong (1964) and one in Rajshahi (1969). Considering the growing needs for semi-skilled and skilled workers, seven more TTCs were established in seven districts, namely, in Khulna (1981), Rangamati (1980), Faridpur (1984), Comilla (1980), Mymensingh (1985), Barisal (1985) under the technical assistance of ILO/UNDP and IDA. In addition to 11 TTCs there are 51 Vocational Training Institutes (VTIs) which also impart training for the development of semi-skilled and skilled manpower; with an annual intake capacity of 2740. There is one Technical Teachers Training College (TTTC) in Dhaka which offers graduation degrees for the teachers of Polytechnic Institutes. One Vocational Teachers Training Institute (VTTI) in Bogra offering diplomas for the Teachers/Trainers of VTIs.
3. Both VTIs and TTCs follow the same curriculum for common trades prepared by the Technical Education Board (TEB) corresponding to the national criteria of skill development and training for different levels which are determined by the National Council for Skill Development and Training (NCSDT). Trade standard setup by NCSDT and certification are jointly in force in collaboration with Bangladesh Technical Education Board. Though both the VTIs and TTCs offer the same skill development training programme, but administratively they function under two different ministries - the former one is in the Ministry of Education under Directorate of Technical Education (DTE) and the other one in the Ministry of Labour and Manpower under BMET.

4. There are 11 TTCs in eleven different district headquarters. Ministry of Labour and Manpower, has entrusted Bureau of Manpower, Employment and Training (BMET), headed by one Director General to run the training programme in TTCs for achieving the following objectives.

- (a) Development of human resources by providing skill training and retraining for improvement of skills;
- (b) Provision of employment service both in overseas and in-country;
- (c) Collection of labour market information;
- (d) Employment generation through self-employment;
- (e) Vocational guidance and employment counseling to school children and school leavers.

5. To attain the above objectives, BMET operates with two separate wings (a) Employment Services Wing, and (b) Training Services Wing. Employment Services Wing broadly looks after the employment generation activities while Training Services Wing deals with the training activities in different TTCs and Bangladesh Institute of Marine Technology (BIMT). Employment Services Wing while mobilizes its efforts to generate employment opportunities for TTC outputs, it is also responsible to assist employment generation for every employable man and women who are presently unemployed, irrespective of their levels of skills and expertise. To accomplish this it has its own organizational service system both at home and abroad. Training Services Wing (TSW) concentrates broadly in three areas such as, (a) Institution-based training, (b) Industry-based training, and (c) Formulation of training policies at national level. While the former two primarily concern with the operations of eleven TTCs, the last one acts as a feed-back system for the consideration at the national level.

6. To assist training services wing, there are officially 4 zonal directorates located in four divisional headquarters. These directorates are supposed to inter-act with the TTCs at the regional level for facilitating their operational performance.

Unfortunately due to lack of financial and administrative bottlenecks these directorates are not in operation.

7. Technical Training Centers are planned to operate three types of training programmes, namely, (a) Regular Courses of two years duration, (b) Skill Development Training for two to six months duration, (c) Self-financed Evening Training Programme for a period of six months. In addition to these three types of courses offered in every TTC, there is one Garment's Industry Training Programme being offered in Mirpur Bangla-German Technical Training Center to meet growing needs of skilled workers in garments factories inside Bangladesh.

8. Regular courses are divided into two distinct levels of skill development i.e. after completion of first year a trainee has the option to continue his second year course or leave the institute. In each year a trainee should go through 9 months institution-based and 3-months industry-based training to learn more and testify his skills acquired in the institutional level.

9. In 11 TTCs there are now total 15 regular trades offered with varied number and nomenclature of trades. It was observed that that out of total number of regular trades only four such as General Mechanic, Automotive, Electrical and Masonry are offered in every TTC. The percentage of the sanctioned intake capacity of these four trades in relation to the total intake capacity for all trades is 46.8 of which individually they represent the following: General Mechanic (23.9%), Automotive (25.5%), Electrical (28.3%), and Masonry (22.3%).

10. For other courses not common to all TTCs carpentry occupies the highest allocation (10.5 per cent) followed by Welding (7.6 per cent), Civil Drafting (6.0 per cent) etc. These trades represent 73.3 per cent of the total number of trades, and occupy 53.2 per cent of the total sanctioned capacities.

11. A periodic inspection of training activities at the institution level is being pursued by BMET. Zonal inspection teams monitor TTCs in their respective zones at least once in a year. Director General and other high officials of BMET visit as many as TTCs to review the overall performance and related activities. On the top, BMET has to arrange NCSDT committee

inspection of at least one TTC in a year and review the state of training standard pursued by the committee.

12. In a number of studies it was observed that there prevails a very high level of unemployment amongst the TTC graduates which is utterly discouraging. This scenario leads to the following considerations.

- a) Revision of trade curriculum is needed to suit the actual requirement of the labour markets both at home and abroad. New trade curriculum should emphasize more on contents and duration of different trades.
- b) Coverage of trades need to be extended to accommodate the needs of developing private sector with intensive care on apprenticeship and on-the-plant training that will lead to develop competence and confidence of passed-out trainees.
- c) Trained people should demonstrate their superiority over the untrained in practical performance. For this, government should provide additional facilities for apprentices in factories and added incentives to employers producing such training facilities for TTC trainees.
- d) Local Advisory Committees consisted of the representatives from the private sectors attached to each TTC be given more emphasis. The membership of these committees should be expanded by drawing more representations from the private sector. Frequent dialogue beyond the framework of the above committees between TTC and the private entrepreneurs should be given priority. This will help to know the needs of the private sector people directly and also mobilize their interests for trained personnel.
- e) Employment Wing of BMET should increase their efforts to monitor and follow-up employment situations of passed-out trainees of TTCs. Mass media campaign in Radio, TV, and Newspapers should be organized by the wing for creating awareness and increased demand for TTC trained people in the local labour market. The labour attache of Bangladesh Embassies abroad should provide more services to facilitate overseas employment for Bangladeshis and extend enough feed-

backs to potential job seekers in the unknown foreign labour markets.

f) Soft credit facilities should be extended to TTC passed-out trainees enabling them to become self-employed.

13. Capacity utilization and the rate of passed out graduates in each TTC over the period of 1982-1993 for the regular trades was highest in Chittagong TTC (81%) followed by Mirpur Bangladesh-German and Mymensingh TTCs (75%) and Rajshahi TTC (71%). For all TTCs capacity utilization was as low as 63 percent during the above period. From the percentage of passed-out trainees to the total enrollment in TTCs, it appeared that Mirpur Bangla-German TTC scored the highest (71%) followed by Chittagong (59%) and Mirpur TTCs (56%). On an aggregate, the percentage of passed-out trainees was significantly low; only 55 per cent. Remaining 45 per cent include both dropped-out and unsuccessful trainees in trade examinations.

14. Areas of JOCV involvement since 1982 are as follow:

- Agricultural Machinery
- Handicrafts
- Animal Husbandry
- Dress Making
- Home Economics
- Fish Culture
- Nursing
- Laboratory Technology
- Radiography Technology
- Sports
- Technical Training Center (TTCs)

Total number of JOCVs in TTCs during 1982 to 1993 stands at a figure of 73. So far 60 JOCVs completed their terms in different TTCs in addition to 13 presently being engaged. From the Year-wise dispatchment of JOCVs during 1982 to 1993 to different TTCs, Chittagong TTC had acquired the highest number (16.4%) of JOCVs followed by Khulna (12.7%) and Mirpur TTC (11.4%). Highest concentration of JOCVs involvement was in Automotive Trade (23.8%) followed by Electrical/Electronics and Welding.

15. According to the present system, dispatchment of JOCVs concerning number and specific areas of assistance in different TTCs is settled at a higher level without due consideration of TTCs requests. This built-in-linkage gap contributes to the following problems:

- a) Actual needs of (TTCs) in terms of JOCV expertise for specific trades are often not met by BMET. It was observed during visits to TTCs that they had to accept JOCV's for which no request had been made or sometimes it so happened that requests are not being responded properly. As a result quite often the JOCV's are under utilized or TTCs are deprived of required expertise.
- b) Under-utilization of JOCV expertise, in turn, has its own demoralizing effects on the volunteers.
- c) In some cases it was observed that TTC do not carefully plan the utilization of JOCVs effectively.

16. Presently, on an average, 2 JOCVs are attached to each TTC which amply demonstrates their degree of involvement in overall institutional activities. Participation in such a low level makes it difficult to assess the contribution of JOCVs in a measurable degree in the overall performance level of each individual TTCs. However, individual performance of some JOCVs in particular trades had great impact on the quality of training.

17. Assessment of JOCVs contribution at the institutional level becomes difficult on account of the following reasons:

- (a) No official record maintained by TTCs either for individual or group performance of JOCV's at the TTC level,
- (b) In annual reports prepared by Principals of TTCs there is hardly any mention about the activities of JOCV's. It seems that TTC authorities as well as BMET are yet to fully comprehend the participation of JOCV's as a long-term and on going process aimed at strengthening institutional capabilities.

18. Factors which need to be highlighted for future consideration to improve operational performance of JOCVs at the

institutional level are outlined below:

I) Language Barrier:

JOCV's need to learn Bangla so as to communicate with Staff, Trainees and Principals. Bangladesh Instructors and Principals can converse both in Bengali and English, but for JOCV it sometimes become difficult to express technical aspects of his/her discipline either in Bengali or English.

II) Lack of knowledge of foreign equipment:

JOCV's are skilled professionals as they have completed their training in Japan on their modern Japanese equipment. Trained on modern technology, it is difficult for them to adjust in a situation of Bangladesh, where the existing technology is quite out-dated.

III) Inadequate Instructional Training abilities:

JOCV's are lacking in the area of imparting training to instructors due to their lack of instructional training given in Japan. Although JOCV's are well trained and have obtained a professional status in their field of technology, some have yet to gain enough experience. The age is an important factor for JOCV's as senior instructors in some cases are reluctant to take guidance from JOCVs who are much younger in age.

IV) Designation "Junior Expert":

This designation has in many ways put more undue pressure on the JOCV's than is required. It has been stated by the Principals, Instructor, that he/she is an expert which forces them to live up to that standard. However equipment and curriculum are not to a standard for which the "expert" can show his/her talents. This often leads to junior experts being referred to or perceived as "un-experienced experts".

V) Under-utilization of JOCVs by TTC's Principals/Senior / Instructors:

Under utilization of JOCVs is also due to the fact that there has been no real direction from the appropriate authority given to the Principal as to whom the JOCVs are accountable. The

Principals are not motivated enough to enquire or to use his position to find out how he could make more use of the volunteers. As a result JOCVs have very poor communication with Principals even when that is most required.

VI) Misplacement or non placement of required JOCV:

For the placement of JOCVs , the Principals first request BMET. BMET in turn follows the usual administrative procedure and then finally it reaches JICA. At times some requests are not properly deal with either by BMET or at some other decision level authority of Government of Bangladesh resulting to misplacement of JOCV to a particular assignment. This sometimes leads to frustration and non utilization of JOCV expertise. Had there been a procedure where JOCV/JICA, Dhaka in consultation with the Principals of TTC, could submit the proposal of dispatchment of JOCV to BMET, in that case there might have a high percentage of success of placement of JOCV to different TTC. This needs to be considered.

VII) Following the syllabus/curriculum:

JOCVs sometimes do not follow the Technical Education Board (TEB) curriculum. The reason is that the curriculum has to be adjusted at times because the trainees are not always capable of understanding the curriculum at the level needed.

VIII) Length of stay:

It was suggested that JOCVs should stay longer than 2 years for TTCs to gain more from their knowledge and abilities.

IX) More needed areas:

It was expressed by many TTC administrations that more JOCVs are required in the fields of Radio, TV and Refrigeration as there is a growing demand for these trades in the job market both in the country and abroad.

X) Inadequate equipment facilities:

The equipment and workshop facilities were not adequate to give trainees even a semi-skilled basic training. TTCs having the

facilities also facing difficulties due to lack of repairing and maintenance of the equipments and more over they do not have skilled manpower to do the job. In many of such cases JOCVs have taken up the job of maintenance at their own initiative.

XI) Lack of communication between Principals and JOCV/JICA:

Principals generally do not communicate directly with the JOCV's nor they have given any direction or guideline from BMET on their responsibilities and line of action in utilizing the assistance of JOCVs assigned to their institute. This has developed a serious communication gap between TTC administration and JOCV's. Moreover, a communication gap is also there between the Principal, BMET and JICA/JOCV coordinators who are responsible for both the placement and proper utilization of JOCV's.

XII) Shortage of Training Materials:

JOCVs they face serious problems while working with the trainees in practical classes due to shortages in training materials which are not procured in time. This results in wastage of time and deterioration of the quality of training.

19. WITH ALL THE CONSTRAINTS AND LIMITATIONS, JOCVs HAVE SO FAR BEEN ABLE TO MAKE SUBSTANTIAL CONTRIBUTION IN THE FOLLOWING AREAS:

- a) Preparation of a number of training manuals/handbooks jointly with the instructors in different institutes. These manuals are all available in Bengali.
- b) Organization of skill competitions between TTC trainees on different trades in Dhaka
- c) Training of TTC trainers both at the institutional level and Central Levels in cooperation with BMET.
- d) Identification and procurement of equipments and teaching aids.
- e) Identification of suitable candidates to be sent to Japan for training.

20. Some NGOs like MAWTs and UCEP are operating in the same areas of technical training who are basically aimed at providing skill development technical training closely linked with the job market within their limited institutional capabilities. Following factors have directly contributed to the success achieved by the above two NGOs:

- a) Organizational autonomy for the overall institutional activities;
- b) Flexibility and adaptability of training programmes to the market and its changing behaviour;
- c) Selection of trainees from the economically depressed sections who have got aptitudes for such type of training and not only based on the educational background. MAWTS does not apply educational requirement for inclusion in two short term courses vis-a-vis similar types offers in TTCs;
- d) Training staff and administration are composed of highly motivated people who are continuously thriving for the fulfillment of organizational objectives;
- e) Trainers and other employees in both MAWTS and UCEP are being paid much higher salary compare to that of TTCs.

21. MAJOR OBSERVATIONS

- a) Newly appointed instructors are lacking experience of commercial production and thereby do not take interest in training and motivational activity. Senior instructors because of their status generally take theoretical classes quite efficiently but the practical classes are taken by junior instructors, who generally lacks in experiences and capability.
- b) A number of instructors were sent to Japan for training but on return their knowledge had not been properly utilized.
- c) Quite a few Principals have come to their position by promotion and manage to keep the center functioning strictly within the guidelines of BMET. They strictly follow whatever

is imposed from the above and do not dare to make any slightest changes to suit the need of the local situation without the prior approval from BMET.

- d) Present remuneration package for TTC trainees is not enough to stimulate better performance and thereby to attract more qualified trainees.
- e) Though officially a trainee after completion of two years course in TTC is believed to move to the level of skilled worker but in terms of level it is equivalent to semi-skilled worker.
- f) Due to the existing gap between Principal and JICA/JOCV coordinators who are responsible to visit and investigate the placement and to know other problems, the role of JOCVs are often undermined.
- g) Different TTCs are using different types of machinery / equipment. Newly established TTCs are using more modern machinery for training compare to older TTCs resulting difference in standards in terms of quality training even when using the same trade curriculum. There are machinery in old TTCs which are obsolete and are not worth repairing.
- h) For a trade course like carpentry, plumbing and machinist, not many students are showing interest.
- i) From the discussion both with Principals, private entrepreneurs and some officials responsible for manpower developments for finding employment opportunities abroad, it appeared that the current situation now demands to introduce some new courses in different TTC's supported with required expertise and equipment.

22. RECOMMENDATIONS FOR JICA

- a) JOCVs should go for additional technical based language training to perform their job for skills transfer effectively and efficiently.
- b) Before dispatching to TTCs, JOCVs should undergo in country orientation training particularly on the curriculum and the

type of machinery and equipments are being used in the TTCs.

- c) Frequent communication between JOCVs and the JOCV office in Dhaka should be given priority. Bi-annual meeting between BMET and JOCV Coordinators should take place to review the progress of the implementation of the programme. Moreover, JOCV Coordinators should visit TTCs on a regular programme to assist resolving the issues hindering the efficient implementation of the programme in line with its objective. Their visits should be followed up by reports addressed to the principals and BMET for an effective linkage between JICA and BMET. This will improve the working condition between principal and JOCVs and follow-up assistance from JOCV/JICA and BMET.
- d) On receipt of the requests from Bangladesh side JOCV Coordinators should visit the TTCs to assess their needs and preferences of JOCVs for a particular discipline and communicate with Government of Bangladesh accordingly. JICA-Bangladesh should make some arrangement with BMET for reviewing the request and make preliminary selection of required trade courses for different TTC before processing the same at a higher level.
- e) A periodic self-evaluation report following a standard format should be prepared by each JOCV and submit the same to the local office. Based on these periodic reports and also on the reports of the field visits, JOCV local office may consider to produce a yearly report on JOCVs performance.
- f) A follow up study of this report should be undertaken in due course to ascertain the implementation progress of the recommendations highlighted here.

23. RECOMMENDATIONS FOR GOVERNMENT OF BANGLADESH AND JICA/JOVC

- a) JOCV, in association with local instructors should develop and impart a job oriented production based training utilizing the existing facilities of the respective TTC. In case of need JOCV should make an attempts to procure the required machinery and equipment to fill up deficiencies and there make the programme a purposeful one. Programme of some of the NGOs can be considered in this regard.

- b) A feasibility study should be conducted for establishing a Central Institute of Instructors Training (In-service and Pre-service) to improve the capabilities, quality, and upgrade of professional knowledge of the instructors of both TTCs and VTIs and also such other institutes. Senior JICA experts and also qualified local professionals should be employed as teaching specialists in this institute. This institute will definitely add to a better coordination and understanding of the working programme of JOCVs and TTCs. Detailed can be worked out in due course.
- c) Considering the employment situation both in the country and abroad, some new courses be started in different TTCs with the Technical Assistance of JICA supported with the dispatchment of JOCVs along with the required equipment and workshop machinery under the intensive joint supervision of BMET and JICA. These course are mainly: Electronics, Air-Conditioning, Refrigeration, Computer, Industrial Sewing, Machine Operator, Radio and TV, Garments, Deep Tubewell and Power Pump Mechanics and Food Processing. As a future plan of operation a detailed programme on the above aspects be formulated jointly by BMET and JICA on a priority basis.
- d) One senior JICA expert is to be deputed to BMET for monitoring, guiding the activities of JOCVs and also extending required advises and support services for effective implementation of training programme of Technical Training Centers.

24. RECOMMENDATIONS FOR GOVERNMENT OF BANGLADESH

- a) Existing remuneration package for trainers of TTCs be considered to increase as an incentive to the trainees.
- b) Refreshers training for trainers at least once in a year be organized locally and be conducted by senior level professionals. Foreign training be considered of a shorter duration and thereby include more number of trainees for foreign training.
- c) Modern training aid be installed in all TTCs to help reduce lecture part and to ensure that the training does not suffer

in any way due to both functional and administrative stringency.

- d) TTCs be given more functional autonomy and thereby to improve motivational aspect of TTC administration.
- e) Amount of the stipend of the trainees should be enhanced.
- f) In admission test more emphasis should be given on the aptitude of the candidates instead of simply qualifying them on education criterion particularly in case of part-time courses.
- g) A thorough review of the type of machinery for training in all TTCs should be undertaken to upgrade them in order to maintain a homogeneity in the level of training. This should be done keeping in view of their adaptability in practical fields. A system of maintenance for all types of machineries should be evolved.
- h) To meet the in-country demand, some sort of incentives and flexibility be given particularly for the trade courses like carpentry, plumbing and machinist. If required, the education qualification for admission in these courses can be kept upto the completion of Class V.

ACRONYMS

BMET:	BUREAU OF MANPOWER, EMPLOYMENT AND TRAINING
BIMT:	BANGLADESH INSTITUTE OF MARINE TECHNOLOGY
VTI:	VOCATIONAL TRAINING INSTITUTE
TTC:	TECHNICAL TRAINING CENTER
ILO:	INTERNATIONAL LABOUR ORGANIZATION
NGO:	NON-GOVERNMENTAL ORGANIZATION
MAWTS:	MIRPUR AGRICULTURAL WORKSHOP AND TRAINING SCHOOL
UCEP:	UNDERPRIVILEGED CHILDREN EDUCATION PROGRAMME
TEB:	TECHNICAL EDUCATION BOARD
BBS:	BANGLADESH BUREAU OF STATISTICS
PC:	PLANNING COMMISSION
JOCV:	JAPAN OVERSEAS COOPERATION VOLUNTEERS
JICA:	JAPAN INTERNATIONAL COOPERATION AGENCY

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CHAPTER-1

INTRODUCTION:

1.1 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) in Bangladesh has been assisting the development programmes and projects of different sectors since 1974. One of the major areas of involvement of JICA is technical training programme for both semi-skilled and skilled manpower. JICA's involvement in this programme through the dispatchment of JOCV's to different Technical Training Centers of Bangladesh has started from 1973.

1.2 Technical Training and Education are administered by The Ministry of Labour and Manpower and The Ministry of Education. Besides, some other organizations and NGOs also have undertaken this type of programme both within and outside the purview of public sector.

1.3 JOCVs are providing both technical and material assistance to different Technical Training Centers (TTCs) in two inter-dependent components, (a) Dispatchment of Japan Overseas Cooperation Volunteers (JOCVs), and (b) Providing TTCs with equipments and machineries for conducting on the job training programme.

Presently, JOCVs/"Junior Experts" are engaged in a wide range of trades to assist the local trainers and in imparting technical training. JOCVs assistance to training activities includes Preparation of Training Manuals for different trades, Mobilization of equipment/machinery, Organizing the Instructors Training Workshop and conducting Skill Competition between different TTCs.

1.3 On completion of 10 years continuous assistance to this programme, JICA Bangladesh considered it to be necessary to assess the impact of JICA Technical Assistance and JOCVs

involvement to the training programme of Technical Training Centers for developing skilled manpower. Furthermore, the findings observations and recommendation of this evaluation will be of substantial contribution in formulating future development programme in this area. This study thereby is an outcome of this need, covering the period of 12 years from 1982 to 1993.

1.4 While evaluating this type of programme one can hardly deny the importance and analysis of other relevant factors which were beyond the control of JOCV's, and thereby affecting the performance of TTCs and effective utilization of JOCV's assistance.

1.5 This evaluation has attempted to provide some insights from the systems now being followed and highlights some institutional performance of TTCs that might be used for future evaluation. Attempts have also been made to indicate as how the cooperation between JICA/JOCV and TTCs of Bangladesh can be strengthened. A brief review on the performance of some related NGOs will also be useful in formulating strategies, guidelines and plan of operation for such type of programme in public sector.

CHAPTER-2

TERMS OF REFERENCE

- I. To assess the impact of Japan Overseas Cooperation Volunteers (JOCV) assistance to the training programmes of 11 TTCs primarily aimed at the development of skilled manpower.
- II. To identify the existing limitations for effective utilization of JOCV assistance in the context of human resources development and creation of gainful employment opportunities both at home and abroad.
- III. To review the existing system of training programmes of 11 TTCs, in particular, curricula development, recruitment of instructors, admission, examination system and other relevant administrative and functional aspects.
- IV. To study the modus of operendi in dispatching JOCV volunteers by JICA and indicate a system for future programme.
- V. To suggest strategies, guidelines to strengthen the management capability of TTCs, and effective utilization of JOCV expertise.
- VI. To identify the existing limitations of training programmes, its effectiveness and future development.
- VII. To conduct a rapid bench-mark survey of the existing programme for facilitating the future evaluation.

CHAPTER-3

METHODOLOGY:

3.1 (a) Review of the various studies so far conducted on the performance of technical training and education programme by different organizations including that of TTCs in Bangladesh.

(b) Review of some published documents available in BMET.

(c) Review of the relevant issues in regard to the role played by TTCs for imparting technical training to semi-skilled and skilled workers.

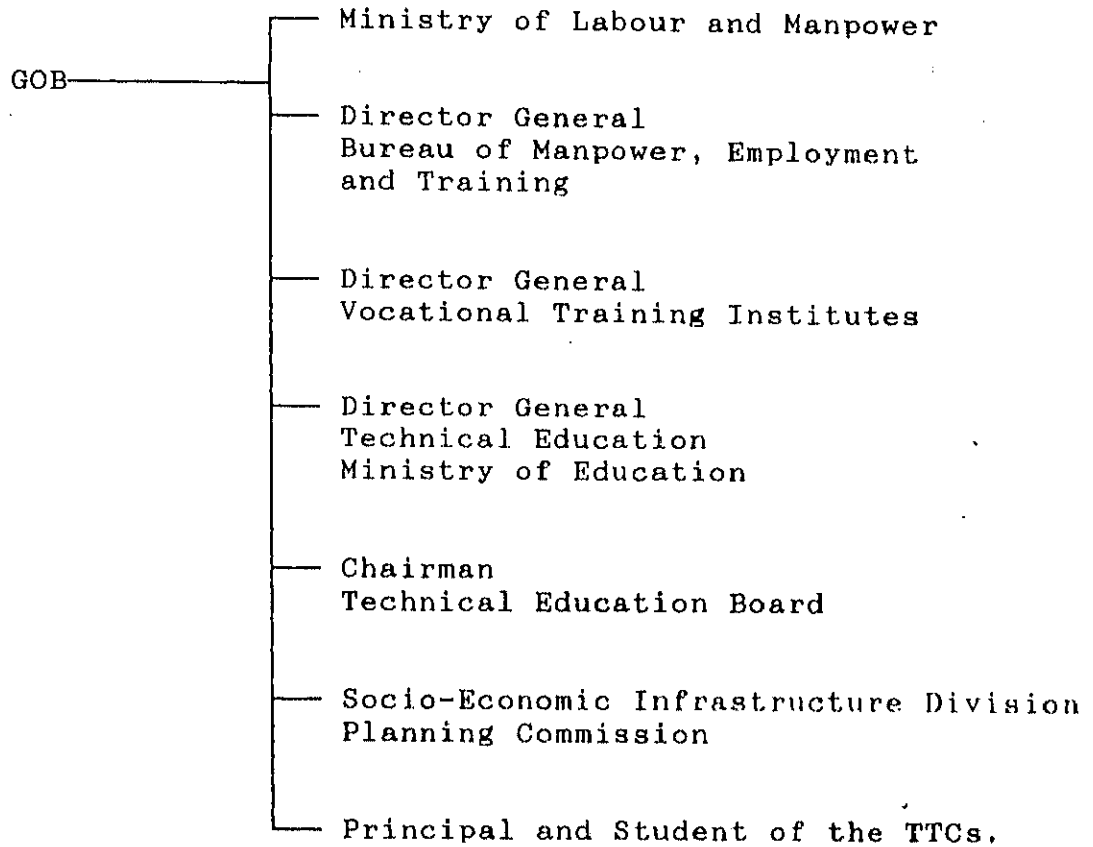
(d) Informal interviews and discussions with the officials of BMET to make an objective assessment of the existing situation.

(e) Visit to 8 TTCs out of total 11 and to meet with the TTC administrations, JOCVs and trainees to get feed-back and impressions at the field level. These visits have contributed for having first hand ideas on the activities of JOCV and the working conditions of different TTCs.

(f) A pre-designed questionnaire was sent to each TTC for obtaining some specific data on different indicators for performance evaluation of the center from 1982-1993. Other relevant informations available at TTCs and written comments were collected from some TTC administrations during the visits. Moreover a questionnaire was sent to each volunteer to assess his/her personal views about their role at the TTC.

3.2 Two separate meetings at JICA Office, Dhaka were held. One with the relevant officials coordinating JOCV activities. The other one was with all JOCVs presently working in 8 (eight) TTCs. Meetings and interviews with the relevant Ministry/Department / Organizations/Institute, private industrial entrepreneurs, JOCV

volunteers, principal and students of the 11 TTCs and few graduates were made. Meetings and interviews were made broadly in the following categories:



JICA ————— JOCV Volunteers

Private Entrepreneurs ————— Large, Medium and Small
Industrial entrepreneurs

NGOs ————— Relevant NGOs.

CHAPTER-4

ORGANIZATION OF THE REPORT

4.1 Presentation of this report is structured in accordance with the objectives of the study. The first chapter presents introduction. The second and third chapter deals with Terms of Reference and Methodology. The fifth and sixth chapter gives a of technical training and education in Bangladesh highlighting briefly the activities of different institutes in the field of technical education and training other than TTCs in Bangladesh. The seventh chapter mainly narrates the role of TTCs for semi-skilled and skilled manpower development along with the overall activities of TTCs and to identify the factors which influence their performance and its evaluation during the period of 1982 to 1993. The eight and ninth chapter attempts to elaborate the role of JOCVs in different TTCs. Main emphasis in this chapter has been given on the identification of limitations and constraints within which JOCVs has to work in addition to an analysis of their operational performance at different TTCs. The tenth chapter depicts some important aspects and activities of two NGOs operating almost in the same areas of technical training. The eleventh chapter illustrates some observations and findings made on the factual and analytical informations obtained during the evaluation. The twelveth chapter suggests recommendations for strengthening the training programme in the context of human resource development and creation of gainful employment opportunities both at home and abroad with the technical assistance of JICA and effective utilization of JOCVs by formulating a comprehensive and integrated programme.

CHAPTER-5

OVERVIEW OF TECHNICAL TRAINING PROGRAMME

5.1 Realizing the needs and importance of technical education and training of semi-skilled and skilled manpower the first Technical Training Center under the Directorate of Labour was established in Dhaka during the period of Second World War. During 1960-69 four Technical Training Centers were established with modern institutional facilities. Out of these four, two are in Dhaka (Mirpur TTC - 1963 and Bangla-German TTC - 1968), one in Chittagong (1964) and one in Rajshahi (1969). Considering the growing needs for semi-skilled and skilled workers, seven more TTCs were established in seven districts, in Khulna (1981), Rangamati (1980), Faridpur (1984), Comilla (1980), Mymensingh (1985), Barisal (1985) under the technical assistance of ILO/UNDP and IDA.

In addition to 11 TTCs there are 51 Vocational Training Institutes (VTIs) which also impart training for the development of semi-skilled and skilled manpower, with an annual intake capacity of 2740. There is one Technical Teachers Training College (TTTC) in Dhaka which offers graduation degrees for the teachers of Polytechnic Institutes. One Vocational Teachers Training Institute (VTTI) in Bogra offering diplomas for the Teachers/Trainers of VTIs.

5.2 Both VTIs and TTCs follow the same curriculum for common trades prepared by the Technical Education Board (TEB) corresponding to the national criteria of skill development and training for different levels which are determined by the National Council for Skill Development and Training (NCSDT). NCSDT is a statutory body at the national level which formulates National Skill Development Policies including review of curriculum development, setting up of trade standards, trade testing and certification so as to ensure an unified skill

development training standard both at public and private sectors training institutes. Therefore, trade standard setup by NCSDT and certification are jointly in force in collaboration with Bangladesh Technical Education Board. Institutional pre-employment training in VTIs and TTCs impart skill development to semi-skilled and skilled workers. (Composition NCSDT at Annex-8).

Though both the VTIs and TTCs offer the same skill development training programme, but administratively they function under two different ministries - the former one is in the Ministry of Education under Directorate of Technical Education (DTE) and the other one in the Ministry of Labour and Manpower under BMET.

5.3 Along with the public sector involvement in the field of institutional training for technical education and training, there are numerous establishments in private sector imparting training at the semi-skilled and skilled levels on commercial basis. In absence of any recent and comprehensive studies, on the training institutes in the private sector and the type of trades offered by them, it is worth mentioning some observations from the survey conducted by BMET in 1979. It was revealed that 51 technical institutes were set up in the private sector mainly in industrially developed urban areas. They used to offer 15 vocational courses of different duration directly linked with the immediate labour market demand with an yearly intake capacity of 6850 trainees. Presumably the number of such institutes has increased manifold with the extension of trade coverage in each institute. Other than private initiatives a number of NGOs are also providing effective institutional support for vocational training in Bangladesh. Amongst NGOs namely CARITAS, BRAC, UCEP and MAWTS are worth mentioning which are equipped with proper institutional and infrastructural arrangements to train their target groups directly on production and job-oriented training activities (Chapter-10).

CHAPTER-6

REVIEW OF THE INSTITUTIONAL AND FUNCTIONAL ACTIVITIES OF THE TECHNICAL TRAINING CENTERS

6.1 Institutional arrangement and training facilities of 11 TTCs primarily directed towards the development of semi-skilled and skilled manpower were reviewed. Visits to 8 TTC and review of related reports have greatly substantiated in understanding the existing scenario of activities of different TTC. All these were important since any kind of performance evaluation of JOCVs in different TTCs is difficult to be done by avoiding them from the prevailing conditions within and outside the TTCs.

6.2 There are 11 TTCs in eleven different district headquarters. Besides, one Bangladesh Institute of Marine Technology (BIMT) in Narayanganj functions under the Ministry of Labour and Manpower. Ministry of Labour and Manpower, has entrusted the Bureau of Manpower, Employment and Training (BMET), headed by one Director General with the administrative control to run the programme as below for all these institutes.

- (a) Development of human resources by providing skill training and retraining for improvement of skills;
- (b) Provision of employment service both in-country and overseas;
- (c) Collection of labour market information;
- (d) Employment generation through self-employment;
- (e) Vocational guidance and employment counseling to school children and school leavers.

6.3 To attain the above objectives, BMET operates with two separate wings (a) Employment Services Wing, and (b) Training Services Wing. Employment Services Wing broadly looks after the employment generation activities while Training Services Wing deals with the training activities in different TTCs and BIMT. Employment Services Wing while mobilizes its efforts to generate employment opportunities for TTC outputs, it is also responsible

to assist employment generation for every employable man and women who are presently unemployed, irrespective of their levels of skills and expertise. To accomplish this it has its own organizational service system both at home and abroad.

Training Services Wing (TSW) concentrates broadly in three areas such as (a) Institution-based training, (b) Industry-based training, and (c) Formulation of training policies at national level. While the former two primarily concern with the operations of eleven TTCs, the last one is acts as a feed-back system for the consideration at national level.

6.4 To assist training services wing, there are officially 4 zonal directorates located in four divisional headquarters. These directorate are supposed to inter-act with the TTCs at the regional level for facilitating their operational performance.

Technical Training Centers are planned to operate with three types of training programmes namely, (a) Regular Courses of two years duration, (b) Skill Development Training for a period of two to six months duration, (c) Self-financed Evening Training Programme for a period of six months. In addition to these three types of courses offered in every TTC, there is one Garment's Industry Training Programme being offered in Mirpur Bangla-German Technical Training Center responding in meeting growing needs of skilled workers in garments factories.

6.5 Regular courses are divided into two distinct levels of skill development i.e. after completion of first year a trainee has the option to continue his second year course or leave the institute. In case of later, a trainee will attain the semi-skilled level in any chosen trade, while after completion of two years course the trainee will be graduated to the level of skilled worker. In each year a trainee should go through 9 months institution-based and 3-months industry-based training to learn more and testify his skills acquired in the institutional level.

During each course period (July-June) a trainee is subjected to record a minimum 80 percent attendance both in the institute and industrial enterprise separately. Instructors/Trainers, in addition to their normal instructional activities, closely supervise and monitor progress of each individual trainee during the whole course period. Based on the satisfactory performance of

one year a trainee is to appear in the TEB examination for a particular trade certificate.

6.6 Students upon the completion of Class VIII of any general schools are eligible for the admission test for selection in all training programmes except other than in those trades like Civil Engineering, Mechanical Drafting, Refrigeration/Air-condition and Radio/TV where prospective trainees must have Secondary School Certificate.

On enrollment in regular trade course a trainee is given a monthly stipend of Tk. 100.00 for the institution-based training period of nine months and Tk. 250.00 in each month during industry-based training. In addition, every trainee is given a lump-sum amount of Tk. 150.00 for the year to purchase books.

TRADE COURSES OFFERED, SANCTIONED INTAKE CAPACITY, INSTITUTIONAL STRENGTH AND RECRUITMENT OF INSTRUCTIONAL STAFF

6.7 In 11 TTCs there are now total 15 regular trades offered with varied number and nomenclature of trades.

Present sanctioned trade-wise intake capacity instructors strength, and instructor-trainee ratio at the institutional level is given at Annexure-1. It can be seen that out of total number of regular trades only four such as General Mechanic, Automotive, Electrical and Masonry are offered in every TTC. The percentage of the sanctioned intake capacity of these four trades in relation to the total intake capacity for all trades is 46.8 of which individually they represent as following: General Mechanic (23.9%), Automotive (25.5%), Electrical (28.3%), and Masonry (22.3%) (Table-1).

TABLE-1 : TRADE-WISE SANCTIONED INTAKE CAPACITY AND SHARE OF EACH TRADE TO TOTAL INTAKE CAPACITY IN 11 TTCs.

(Figures are in percentages)

NAME OF TRADES	SANCTIONED INTAKE CAPACITY IN GROUPS A&B	SANCTIONED INTAKE CAPACITY TO TOTAL CAPACITY
Group A: Common Trades		
General Mechanic	23.9	11.2
Automotive	25.5	11.9
Electrical	28.3	13.2
Masonry	22.3	10.5
TOTAL	100.00 (2510)	46.8
Group B: Other Trades		
Drafting Mechanical	9.5	5.0
Drafting Civil	11.2	6.0
Radio/TV	9.5	5.0
Refrigeration/ Air-Conditioning	7.0	3.7
Carpentry	19.6	10.5
Welding	14.4	7.6
Machinist	7.7	4.1
Turner	8.4	4.5
Plumbing and Pipe Fitting	9.8	5.2
Dress making	1.4	0.8
Typing	1.4	0.8
TOTAL	100.00 (2850)	53.2
TOTAL	(5360)	100 (5360)

N.B. Figures in parentheses represent absolute number
Source : Derived from Annexure-1

6.8 For other courses not common to all TTCs Carpentry occupies the highest allocation (10.5 per cent) followed by Welding (7.6 per cent), Civil Drafting (6.0 per cent) etc. These trades represent 73.3 per cent of the total number of trades, and occupy 53.2 per cent of the total sanctioned capacity.

While considering the percentage distribution of total sanctioned capacities to different TTCs, it is observed that only four TTCs, namely, Mirpur, Bangla-German, Chittagong, Rajshahi (established during 1960-65) occupy about 54 per cent while the rest seven only 46 per cent (Table -2).

6.9 Courses like (i) Skill Development Training, and (ii) Self-financed evening course are referred to as part-time courses included in the training programmes of BMET. Existing facilities are sufficient to run these courses in the TTCs. The distinctive characteristics of these courses vis-a-vis the regular ones include their non-regularity and length of period. Unlike regular trades these are primarily targeted to those already employed in the job market. They are entitled to participate in these programmes after normal working hours to up-grade their present skills. Minimum educational qualifications are the same as applied in the regular courses with much flexibility in the age limit. Duration of part-time courses differs from each other but does not exceed one year.

CURRICULUM DEVELOPMENT

6.10 Curriculum development is one of the most important aspects of any training programme. It is particularly true for any technical training and education programme which should be very much responsive to the changes in the field of modern and appropriate technology. Bangladesh is lagging behind in the technological development particularly on two fronts (i) machinery (mainly imported) and (ii) meeting the demand of technically trained manpower. In view of the situation curriculum development needs to be looked into as an ongoing process to keep pace with the rapid changes which certainly influence the level of skills of the institutionally trained manpower who in turn generate and upgrade technological base of the country.

TABLE:2 PERCENTAGE DISTRIBUTION OF INTAKE CAPACITY AND INSTRUCTOR TRAINEE RATIO IN TTCs (SANCTIONED)

NAME OF TTC	INTAKE CAPACITY (in percentage)	INSTRUCTOR TRAINEE RATIO
Mirpur TTC	15.8	1:7
Bangla-German TTC	14.3	1:8
Chittagong TTC	13.0	1:7
Rajshahi	10.4	1:13
TOTAL	53.5 (2870)	1:8
Khulna	9.3	1:16
Comilla	8.4	1:14
Rangamati	6.3	1:12
Faridpur	6.3	1:16
Mymensingh	5.6	1:11
Bogra	5.6	1:11
Barisal	5.0	1:13
TOTAL	46.50 (2490)	1:13
TOTAL	100.00 (5360)	(516)

Note : Figures in parenthesis represent absolute number.
Source: Derived from Annexure-1

Bangladesh Technical Education Board (TEB) is entrusted with the responsibility of curriculum development and approval of trade curriculum for all TTC. Experts of the TEB with the overall guidance and feedback from NCSDT, prepares the draft curriculum. Draft version of the existing curriculum is first distributed to a number of industrial units and professionals for comments and suggestions keeping in view the need of the situation. But the responses so far were not found to be encouraging. However attempts are being made by BMET to improve the situation.

6.11 Trade course curriculum, as it stands today, covers the following major components in each year.

<u>ACTIVITY</u>	<u>PERIOD</u>
Theory	20% (Approximate)
Practice	80% (Approximate)
Industrial attachment or project work at the TTC	12 weeks (3 months)
Institutional weekly load	36 weeks (9 months)
Weekly load	33 hours
Total Working Hours	1188 hours

6.12 Inspection of Training Activities

A periodic inspection of training activities at the institution level is being pursued by BMET. For this different types of proforma have developed by BMET. Zonal inspection teams monitor TTCs in their respective zones at least once in a year. Principals in each zone are to submit their inspection reports twice in a year including the self-assessment sheets filled up by the instructors to Zonal Directorate. Director General and other high officials of BMET visit as many as TTCs to review the performance and related activities. On the top, BMET has to arrange NCSDT committee to inspect at least one TTC in a year to observe and review the state of training pursued by the committee.

6.13 Employment Scenario of the Passed-out Students

Technical training at the lower levels of skill development is, aimed at facilitating better employment opportunities for those who undergo such training in both public and private sectors. According to a earlier projection, incremental demand for manpower classified as semi-skilled within Bangladesh was as high as 35 per cent and 40 per cent for overseas markets for non-agricultural employment. The numerical magnitude was about 777,000^{1>}. Presently there exists no systemic monitoring programme to follow-up employment situations of the TTC graduates. Attempts have been made to illustrate some of the useful findings that came out of a number of studies undertake in different years.

6.14 A district-level training needs assessment survey-cum-study covering 557 establishments located in 19 (nineteen) different districts revealed that in 1984 a total member of 43680 skilled and semi-skilled workers were employed in those establishments from 18 different trades. On the contrast, only a fraction (2.9 per cent) of these employed were TTC/VTI graduates, 13.5 per cent were non-TTC/VTI trained personnel and the 83.5 per cent was held by the non-trained labour force.^{2>}

6.15 Another study in 1986 based on survey of 25 selected establishments in both public and private sectors, in Dhaka, revealed similar kinds of information^{3>}. As much as thirty trades were selected for the purpose for the study to testify their usefulness in real business life. Of the total thirty trades fifteen are covered in TTCs/VTIs. It was found that in some cases non-TTC/VTI trades represent around 65 per cent of

1> National Foundation for Research on Human Resources Development: Technical Education in Bangladesh: Capacity and Utilization, (Mimeo), Dhaka, 1979

2> Preliminary Report on Assessment of Training Needs for Technical Training Centers and Vocational Training Institutes of Bangladesh by A.M. Mesbahuddin, 1984, Dhaka.

3> Final Report on Recruitment Rule and Pay Structure of State Corporations (A BMET/UNDP/ILO sponsored project Development of Vocational Training in TTC/VTIs), August 1986, Dhaka.

the total applied trades as against 74 per cent in public sector enterprises implying non-responsiveness of TTC/VTI's trades to private sector needs.

From the above study it reveals that work experience, on-the-job training and age are the deciding factors in recruitment process in all instances. Although trade certificates play importantly for some trades in public enterprises, its importance is negligible for private employers. It appeared during the evaluation that private employers are still not very keen to stress upon the needs of trained workers as long as they can continue on doing business without seriously injuring its profitability at least in the short-run. So far and so long the private entrepreneurs are amply convinced about the long-term profitability of their enterprises measured by the improvement in productivity and quality of the outputs and employ pre-trained employees, this situation will hardly change in favour of institutionally trained manpower in near future.

A high incidence of unemployment amongst the TTC graduates was also evident in a separate survey conducted by BMET in 1987.^{4>} This survey was aimed at assessing the employment situation of only the TTC graduates passed in 1980, 1981, 1982, 1983 training periods. The total number of valid respondents were 1367. Amongst them 40 per cent were remained fully unemployed till the date of responding questionnaire. Trade-wise incidence of unemployment was found to be almost the same across the board. It was recorded that construction sector employed the least percentage of TTC graduates and so far the enterprise level is concerned, private sector had absorbed the highest amount (almost 61 %) followed by government (23 %) and semi-government sectors (16 %).

6.16 In addition to the above findings from secondary sources, the study team visited Export Processing Zone (EPZ) in Chittagong for appraising the existing employment situation in different units. It was observed almost 90 per cent employees including lower level technicians in EPZ had no pre-employment institutional training. These untrained workers of EPZ attain

4> A Survey on the employment of TTC Trained Technicians (in Bengali), BMET, Dhaka, 1987.

different skill levels only after being employed through (a) on the job training (90%); (b) off the job training (77%); and (c) training aboard (3%).

Presently the composition of skilled workers employed in EPZ stands as below:

Skilled	50%
Semi-skilled	30%
Un-skilled	20%

6.17 So far the lower level technicians are concerned, in most cases, they do not possess any pre-employment training. Their recruitment are only qualified by years of on-the-plant and apprenticeship training. It was also revealed that most of the entrepreneurs in EPZ know very little about the training programme and schedule of activities in the TTCs for catering the needs of the industries for lower level technicians for which in EPZ there is no dearth of demand.

Notwithstanding the fact that demand for institutionally trained manpower is directly linked with the development of modern sector and level of technological base across the production and service-oriented sectors, the very low level of present employment scenario of TTC graduates within the country is discouraging. This scenario leads to the following considerations.

- a) Revision of trade curriculum is needed to suit the actual requirement of the labour markets both at home and abroad. New trade curriculum should emphasize more on contents and duration of different trades.
- b) Coverage of trades need to be extended to accommodate developing private sector's need with intensive care on apprenticeship and on-the-plant training that will lead to develop competence and confidence of passed-out trainees.
- c) Trained people should demonstrate their superiority over the non-trained in practical performance. For this, government

should provide additional facilities for apprentices in factories and added incentives to employers producing such training facilities for TTC trainees.

- d) Local Advisory Committees consisting representatives from the private sectors be attached to each TTC. The membership of these committees should be expanded by drawing more representations from the private sector. In addition frequent dialogue beyond the framework of the above committees between TTC the private entrepreneurs should be given priority. This will help to know the needs of the private sector people directly and also mobilize their interests for trained personnel.
- e) Employment Wing of BMET should increase their efforts to monitor and follow-up employment situations of passed-out trainees of TTCs. Mass media campaign in Radio, TV, and Newspapers should be organized by the wing for creating awareness and increased demand for TTC trained people in the local labour market. The labour attache in Bangladesh Embassies should provide more service to facilitate overseas employment for Bangladeshis and extend enough feed-backs to potential job seekers in the unknown foreign labour markets.
- f) Soft credit facilities should be extended to TTC passed-out trainees enabling to become self-employed.

CHAPTER-7

PERFORMANCE OF TTCS DURING THE PERIOD 1982-1993

7.1 Capacity utilization and the rate of passed out graduates in each TTC over the period of 1982-1993 for the regular trades is given in Table-3. From the table it can be seen that capacity utilization was highest in Chittagong TTC (81%) followed by Mirpur Bangladesh-German and Mymensingh TTCs (75%) and Rajshahi TTC (71%). For all TTCs capacity utilization was 66 percent during the above period. As regards to percentage of passed-out trainees to the total enrollment in TTCs it appeared that Mirpur Bangla-German TTC scored the highest (71%) followed by Chittagong (59%) and Mirpur TTCs (56%). On an aggregate level, the percentage of passed-out trainees is significantly low; only 55 per cent. Remaining 45 per cent include both dropped-out and unsuccessful trainees in trade examinations.

7.2 Capacity utilization and rate of passed-out trainees for each regular trade in all TTCs have been presented in Table-4(1) for the same period under consideration. It is apparent that maximum utilization was recorded in the air-conditioning trade (86%) followed by automotive (82%), turner (77%), etc. Regarding passed-out trainees, dress-making has been excluded from the ranking as it is being offered in only one or two TTCs. Other than dress-making the above rate is the highest in electricity and electronics trades followed by others.

It is clear from the above two tables that TTCs are suffering from heavy under-utilizations of installed capacities and their performance in terms of outputs is not at all satisfactory.

7.3 Performance of part-time trades shown a better position. Capacity utilization in different TTCs taken together is as high as 82 per cent and the rate of passed-out trainees is 70 per cent [see Table-4(2)]. This indicates a high demand for part-time trades.

TABLE-3 : CAPACITY UTILIZATION AND PASSED OUT TRAINEES
IN TTC'S FOR REGULAR TRADES 1982-1993.

TTC	CAPACITY/ UTILIZATION (PERCENTAGE)	PASSED-OUT TRAINEES AS AGAINST ENROLLMENT (PERCENTAGE)
MIRPUR TTC	62	56
MIRPUR BG TTC	72	70
CHITTAGONG TTC	82	59
MYMENSINGH TTC	75	39
FARIDPUR TTC	47	47
COMILLA TTC	43	50
RAJSHAHI TTC	81	44
BOGRA TTC	30	53
BARISAL TTC	55	49
TOTAL	66	55

Source: Derived from Annexure-2.

TABLE-4(1) : CAPACITY UTILIZATION AND PASSED OUT TRAINEES
IN TTCs FOR REGULAR TRADES (1982-1993).

TTC	CAPACITY/ > UTILIZATION (PERCENTAGE)	PASSED-OUT TRAINEES AS AGAINST OF ENROLLMENT (PERCENTAGE)
DRAFTMAN CIVIL	73	55
DRAFTSMAN MECH.	46	56
AIR CONDITIONING	86	58
ELECTRICITY	73	59
RADIO ELECTRONICS	76	60
GENERAL MECH.	58	54
AUTOMOTIVE	82	51
WOOD WORK	37	57
PLUMBING (SANITARY)	53	44
MASONRY	39	45
MACHINIST	74	53
TURNER	77	56
WELDING	61	56
FOUNDRY/FORGING	17	0
DRESS MAKING	61	84
TOTAL	65	55

Sources: Calculated from primary data collected from
different TTCs.

TABLE-4(2) : CAPACITY UTILIZATION AND PASSED OUT TRAINEES
IN TTCs FOR PART-TIME TRADES (1982-1993).

TTC	CAPACITY/ UTILIZATION (PERCENTAGE)	PASSED-OUT TRAINEES AS AGAINST OF ENROLLMENT (PERCENTAGE)
MIRPUR TTC	72	60
MIRPUR BG TTC	70	75
CHITTAGONG TTC	77	79
FARIDPUR TTC	N.A.	49
COMILLA TTC	N.A.	77
RAJSHAHI TTC	73	84
BOGRA TTC	81	58
BARISAL TTC	77	53
TOTAL	82	70

Source: Derived from Annexure-4

Note : Mymensingh TTC has not yet introduced part-time course.

INSTRUCTIONAL STRENGTH

7.4 In section 6.7 instructional strength of TTCs has been discussed on the basis of the number of sanctioned posts which does not prevail in reality. From Table-5 it can be observed that on the whole the actual instructional strength is only 74 per cent of the total sanctioned strength. This non-fulfillment of strength is partially responsible for the under utilization of intake capacities in TTCs.

TABLE-5 : EXISTING INSTRUCTIONAL STRENGTH IN TTCs

INSTRUCTIONAL	TTCs											
	Mirpur	BG Mirpur	Chittagong	Khulna	Rajshahi	Rangamati	Paridpur	Comilla	Mymensingh	Barisal	Bogra	All
1. Sanctioned	117	92	81	32	42	28	20	32	26	20	26	516
2. Actual	80	76	54	30	38	n.a.	17	25	24	17	21	382
3. (2) as of (1) (percentage)	68.4	82.6	66.7	93.8	90.5	-	85.0	78.1	92.3	85.0	80.8	74.0

INSPECTION OF TRAINING ACTIVITIES

7.5 Inspection of training activities stated in section 6.12 does not hold true in reality except other than submission of annual report prepared by TTC administration. There was supposed to be 4 regional offices for coordination and monitoring of training activities at TTCs, located in four regions. However, none of them are functioning due to non allocation of budget since 1986. So, BMET is directly performing this jobs resulting to the lack of proper supervision and monitoring of TTC training activities as observed during field visits.

CHAPTER-8

ROLE OF JAPAN OVERSEAS COOPERATION VOLUNTEERS (JOCV) IN THE TRANSFER OF TECHNOLOGY IN TTCS

8.1 JOCVs are preferably termed as Junior Experts in Bangladesh. Since 1973 this programme is being implemented under "Record of Discussion" between the Ministry of Planning, Government of Bangladesh and the Government of Japan.

Since 1982 JOCVs have been involved actively and systematically in a wide range of developmental activities of Bangladesh under different ministries and departments.

Areas of JOCV involvement since 1982 are as below:

- Agricultural Machinery
- Handicrafts
- Animal Husbandry
- Dress Making
- Home Economics
- Fish Culture
- Nursing
- Laboratory Technology
- Radiography Technology
- Sports
- Technical Training Center (TTCs)

Total number of JOCVs assigned to TTCs during 1982 to 1993 stands at a figure of 73. So far 60 JOCV have completed their terms in different TTCs 13 are presently being engaged in different TTCs.

8.2 Year-wise dispatchment of JOCVs during 1982 to 1993 to different TTCs is presented in Table-6. It can be seen from the table that Chittagong TTC has acquired the highest number (16.4%) of JOCVs followed by Khulna (12.7%) and Mirpur TTC (11.4%). A similar presentation is made to show JOCVs participation in terms of different trade being offered in all TTCs during the same period (Table-7). It can be seen that highest concentration of JOCVs is in Automotive Trade (24.8%) followed by Electrical/Electronics (19.0) and Welding (12.6).

TABLE-6 : YEAR-WISE DESPATCHMENT OF JOCVS TO DIFFERENT TTCS (1982-1993)

YEAR	TTTC	MIRPUR TTTC (1)	MIRPUR BGTTTC (2)	MYMENSINGH (3)	COMILLA (4)	CHITTAGONG (5)	RANGAMATI (6)	BARISAL (7)	KHULNA (8)	FARIDPUR (9)	RAJSHAHI (10)	BOGRA (11)	TOTAL (12)	12 AS % OF TOTAL (13)
1982		1	-	-	-	3	-	-	-	-	1	-	45	6.3
1983		-	-	-	1	-	2	-	-	-	2	-	5	6.3
1984		2	-	-	-	3	-	-	-	-	-	-	5	6.3
1985		-	-	2	2	1	2	1	3	2	-	-	13	16.5
1986		2	-	-	-	1	-	-	-	-	-	1	4	5.1
1987		-	3	-	1	-	1	2	1	2	1	1	12	15.2
1988		-	-	-	-	-	-	-	-	-	1	-	1	1.3
1989		2	3	1	2	-	-	-	2	1	-	-	11	13.9
1990		-	1	1	-	-	-	1	1	1	-	-	5	6.3
1991		1	1	-	-	4	-	-	1	1	-	1	9	11.4
1992		1	-	2	-	1	-	-	2	1	1	-	8	10.1
1993		-	-	-	-	-	-	-	-	-	-	1	1	1.3
TOTAL		9	8	6	6	13	5	4	10	8	6	4	79	100
%		11.4	10.1	7.6	7.6	16.4	6.3	5.1	12.7	10.1	7.6	5.1	100	

NOTE: OUT OF TOTAL 73, 6 JOCVS WORKED IN TWO TTCS DURING THEIR TERM
SOURCE: JOCV LOCAL OFFICE, DHAKA.

TABLE-7: YEAR-WISE DESPATCHMENT OF JOCVS TO DIFFERENT TRADES (1982-1993)

TRADE YEAR	AUTO-MOTIVE (1)	MECHANICAL DRAFTING (2)	WELDING (3)	CIVIL DRAFTING ARCHITECTURAL DRAFTING (4)	ELECTRICAL / ELECTRONIC (5)	FURNER / MACHINIST (6)	DRESS MAKING (7)	PLUMBING AND PIPE FITTING (8)	GENERAL MECHANICS (9)	REFRIG-ATION (10)	TOTAL (11)
1982	3	1	1	-	-	-	-	-	-	-	5
1983	2	-	1	1	1	-	-	-	-	-	5
1984	2	1	1	-	1	-	-	-	-	-	5
1985	4	1	2	1	2	3	-	-	-	-	13
1986	-	2	-	-	1	1	-	-	-	-	4
1987	2	1	-	2	4	-	2	1	-	-	12
1988	-	-	1	-	-	-	-	-	-	-	1
1989	2	2	2	-	2	1	1	1	-	-	11
1990	2	-	-	1	1	-	-	-	1	-	5
1991	2	-	-	1	2	1	1	-	1	1	9
1992	-	2	2	1	1	1	-	-	1	-	9
1993	-	-	-	-	-	-	-	1	-	-	1
TOTAL	19	10	10	7	15	7	4	3	3	1	79
%	24.8	12.6	12.6	8.9	19.0	8.9	5.1	3.8	3.8	1.3	100

SOURCE: JOCV LOCAL OFFICE, DHAKA

Present System of dispatchment of JOCV in different TTC

8.3 JOCVs are basically supposed to work with government agencies in their different development activities. JOCV's assistance in the different fields and their dispatchment are administered by the relevant ministries of Government of Bangladesh in coordination with the Government of Japan. So far as 8 TTCs are concerned, Principals of TTCs first submit the request for JOCVs of required trades to BMET. BMET finally submit a comprehensive list to Ministry of Labour and Manpower for follow-up action.

8.4 Ministry of Labour and Manpower there after forward the lists to Economic Relations Division (ERD), Ministry of Finance. For Government of Bangladesh, ERD is the final stage of processing the requests for JOCV assistance. In this regard ERD is the official linkage between Government of Bangladesh and Government of Japan.

8.5 It has been understood from the discussion at different levels that this entire procedure takes almost a year for completing all the formalities including procurement, orientation/ language training, both in Japan and in Bangladesh, the prior to the final dispatchment of JOCVs to different destinations of Bangladesh. In some cases requests are being changed, which could not be met by JOCV secretariat in Japan on reasonable grounds.

It has been identified that there exist a gap between the recipient (TTCs) and the authorities responsible for the mobilization of JOCV's. Apparently TTC does not have any significant role in the process of selection of JOCV experts. Moreover, JOCV local office neither have any direct linkage with the TTCs in the process of requests for volunteers nor influence over the selection made by BMET. In fact, specific fields and the number of JOCV's are being decided at a much higher level.

8.6. Further number and areas of JOCVs assistance and their dispatchment to various locations are mainly determined by the above agencies or departments operate under different line ministries as well. So far as the TTCs are concerned, BMET is the recipient organization of JOCVs according to the present system

of dispatchment. It is observed that while the request from different TTCs are scrutinized by BMET, the number and areas of actual needs of JOCVs is assistance often do not remain the same as proposed by TTCs. JOCV secretariat in Japan can not always dispatch the number of JOCVs as per request due to some reason or others.

In the existing system of dispatchment there also remains other important factors which need to be considered administratively. TTCs are placed in a position, leading to a systematic linkage between TTC and the authorities dealing with the mobilization of JOCVs. But the reality is that the involvement of TTCs in acquiring a JOCV is quite insignificant. JOCVs local office does not have any direct linkage with the TTCs while the requests for volunteers are being processed nor do they have any scope to supplement and complement the decisions taken by BMET or the Ministry in regard to the selection and dispatchment of JOCVs.

The matter relating to the number and specific areas of JOCVs assistance in different TTCs is settled at a much higher level. This built-in-linkage gap contributes to the following problems.

- a) Actual needs of (TTCs) in terms of JOCV expertise for specific trades are often not met by BMET. It was observed during visits to TTCs that they had to accept JOCV's for which no request had been made or sometimes it so happened that requests are not being responded properly. As a result quite often the JOCV's are under utilized or TTCs are deprived of required expertise.
- b) Under-utilization of JOCV expertise, in turn, has its own demoralizing effects on the volunteers.
- c) In same cases it has been observed that TTC do not carefully plan the utilization of JOCV effectively.

CHAPTER-9

PERFORMANCE OF JUNIOR EXPERTS AT THE OPERATIONAL LEVEL

9.1 One of the objectives of JOCVs involvement in the development programme in Bangladesh is to transfer of the appropriate form of technology to the trainees. Accordingly, JOCVs attached to TTCs should work and assist TTC's instructional staff in different trades corresponding to their expertise in both theoretical and practical lessons.

9.2 Out of the total of 11 TTCs only in eight TTCs JOCVs are currently involved excluding Comilla, Rangamati and Barisal. Since 1987 there has been no JOCV in Rangamati TTC. On an average, 2 JOCVs are attached to each TTC which amply demonstrates their degree of involvement in overall institutional activities. Participation in such a low level makes it difficult to assess the contribution that can be accredited to the JOCVs. JOCVs performance in TTCs should therefore be viewed on an individual basis.

9.3 This task was again found to be difficult on a number of reasons. Major are some of the following:

- (a) No official record maintained by TTCs either for individual or group performance of JOCV's at the TTC level.
- (b) In the annual reports prepared by Principals of TTCs there is hardly any mention about the activities of JOCV's. It seems that TTC authorities as well as BNET are yet to fully comprehend the participation of JOCV's as a long-term and on going process aimed at strengthening institutional capabilities.

Whatever may be the reasons, for the purpose of the study, the survey team had to rely upon informal discussions and interviews with the principals and other staffs of the TTCs and gather as much information as possible relevant to this study.

9.3 While identifying some of the majors observations it should be understood that as a whole TTC administrations were found to be very careful in passing any comments on JOCV's performance. This attitude of the TTC's principals is possibly because of their insignificant participation in the whole process of both

selection and dispatchment of JOCVs to the respective institutes.

9.4 In response to the question as how the Principal and his professional staffs evaluate the operational performances of JOCV's. In most cases it was found that their responses were more or less balanced one. As quoted, "some times JOCV performance are good and sometimes they are not up to the mark". However, there was found to be a general consensus on the trend of JOCV performance over the years which indicated that initially JOCVs performance was comparatively better both in standard and its utilization compared to the recent years.

9.5 In addition to the general observation on the performance of JOCV as above there are other factors which need to be highlighted for future consideration to improve operational performance of JOCVs at the institutional level. They are outlined as below:

i) Language Barrier:

JOCV's need to learn Bangla to the extent possible and minimal requirement so as to communicate with Staff, Trainees and Principals. Bangladesh Instructors and Principals can converse both in Bengali and English and JOCV should express technical aspects of his/her discipline either in Bengali or English.

ii) Lack of knowledge of foreign equipment:

JOCV's are skilled professionals as they have completed their training in Japan on modern Japanese equipment. Trained on modern technology, it becomes sometimes difficult for them to adjust in a situation of Bangladesh, where the existing technology is out-dated. More over, in many institutes they are to work with equipments of about 20-30 years old from different countries. Although their training and preparation for 2 (two) years terms in Bangladesh gives them awareness of the machinery used here, it does not prepare them sufficiently to use those machinery as efficiently as many of the TTC instructors.

iii) Inadequate Instructural Training abilities:

JOCV's are lacking in the area of imparting training to instructors due to their lack of instructural training given in Japan. Although JOCV's are well trained and have obtained a

professional status in their field of technology, some have yet to gain enough experience. The age and experience is an important factor for JOCV's as senior instructors in some cases are reluctant to take guidance from JOCVs who are much younger in age and experience.

iv) Designation "Junior Expert":

This designation has in many ways put more undue pressure on the JOCV's than is required. It has been stated by the Principals, Instructor, that he/she is an expert which forces them to live up to that standard. However equipment and curriculum are not to a standard for which the "expert" can show his/her talents. This often leads to junior experts being referred to or perceived as "un-experienced experts".

v) Under-utilization of JOCVs by TTC's Principals/Senior / Instructors:

Under utilization of JOCVs is also due to the fact that there has been no real direction from the appropriate authority given to the Principal as to whom the JOCVs are accountable. The Principals are not motivated enough to inquire or to use his position to find out how he could make more use of the volunteers. As a result JOCVs have very poor communication with Principals even when that is most required.

vi) Misplacement or non placement of required JOCV:

Due to the current placement, the Principal requests BMET. BMET in turn follows the usual administrative procedure and then finally it reaches JICA. At times some requests are not properly dealt with either by BMET or at some other decision level authority of Government of Bangladesh resulting to misplacement of JOCV to a particular assignment. This sometimes leads to frustration and non utilization of both the expertise and the tenure of placement to both TTC and JOCV experts. Had there been a procedure where JOCV/JICA, Dhaka in consultation with the Principals of TTC, could submit the proposal of dispatchment of JOCV to BMET, in that case there might have a high percentage of success of placement of JOCV to different TTC. This needs to be considered.

vii) Following the syllabus/curriculum:

JOCVs sometimes do not follow the TEB curriculum. The reason is that the curriculum has to be adjusted at times because the trainees are not always capable of understanding the curriculum at the level needed.

viii) Length of stay:

It was suggested that JOCVs should stay longer than 2 years for TTCs to gain more from their knowledge and abilities.

ix) More needed areas:

It was expressed by many TTC administrations that more JOCVs are required in the fields of Radio, TV and Refrigeration as there is a growing demand for these trades in the job market both in the country and abroad.

x) Inadequate equipment facilities:

From the TTC visited, it appeared that the equipment and workshop facilities were not adequate to give trainees even a semi-skilled basic training. TTCs having the facilities also facing difficulties due to lack of repairing and maintenance of the equipments and more over they do not have skilled manpower to do the job. In many of such cases JOCVs have taken up the job of maintenance at their own initiative.

xi) Lack communication between Principals and JOCV/JICA:

It has been observed during the discussion with the administration of TTC that principals generally do not communicate directly with the JOCV's nor they have given any direction or guideline from BMET on their responsibilities and line of action in utilizing the assistance of JOCV assigned to their institute. This has developed a serious communication gap between TTC administration and JOCV's. More over a communication gap is also there between the Principal, BMET and JICA/JOCV coordinators who are responsible for both the placement and proper utilization of JOCV's. It should be understood that in this type of programme, the activities of JOCV be considered as supplementary and complementary to the total programme.

xii) Shortage of Training Materials:

As reported by some JOCVs, they face serious problems while working with the trainees in practical classes due to shortages in training materials which are not procured in time. This results in wastage of time and deterioration the quality of training.

9.6 Above are the various constraints and limitations within which JOCVs have to perform their responsibilities and contribute to the overall performance of TTCs. There are other more visible areas where JOCVs active participation and effective financial / material support by JICA have, So far, made substantial contribution to the joint collaborative efforts by JICA/JOCV and TTCs in Bangladesh. These areas are high-lighted below.

A. Preparation of a number of training manuals/handbooks jointly with the instructors in different institutes. These manuals are all available in Bengali (Annexure-10).

B. Assistance Provided to Instructors Training Programme

i) Instructors Training Programme only for the instructors of 11 (eleven) TTCs is being assisted importantly by JICA/JOCV since 1991/92 session every year. This programme is organized by BMET which takes place in different TTCs during 3-months on-the-plant training for the trainees according to a suitable training schedule. The two major objectives of this programme are to, (1) enhance both theoretical and practical knowledge of the instructors which needs to be continuously upgraded, and to (2) orient and educate local instructors with the training manuals and job-sheets prepared by JOCVs so that they can follow them and instruct more effectively. The fulfillment of these objectives provides feed-back to JOCVs for the preparation of more developed training manuals and job sheets.

ii) So far 18 (eighteen) instructors training programmes were accomplished during 1991/92 to 1993/94. A total of 235 instructors have attended this programme in nine different trades from 12 institutes including 11 TTCs and one Bangladesh Institute of Marine Technology in Narayanganj. Further, 39 JOCVs have actively participated in different important events of the programme which mainly include mobilization of training materials and equipments, preparation of preliminary post-training evaluation and completion reports (see for detail Table-8).

TABLE-8 : JOCVs INVOLVEMENT IN INSTRUCTORS TRAINING PROGRAMME (1991-1994)

NUMBER OF INSTRUCTORS TRAINING PROGRAMME	TTCs DISTRIBUTION OF INSTRUCTORS ATTENDED IN TRAINING PROGRAMME	TRADE COVERAGE/JOCVs INVOLVEMENT		
		TRADE/NUMBER OF TIMES	TTC INSTRUCTORS ATTENDED	NUMBER OF JOCVs INVOLVED
18	MIRPUR - 54	WELDING - 2	20	2
	KHULNA - 26	MACHINE SHOP - 4	106	16
	MIRPUR B/G - 26	MECHANICAL DRAFTING - 3	35	8
	RAJSHAHI - 26	RADIO/TV - 1	5	1
	CHITTAGONG - 24	AUTOMATIVE - 3	27	6
	COMILLA - 18	REFRIGERATION- & AIR-CONDITIONING - 1	13	1
	BOGRA - 15	DRESS MAKING - 1	2	1
	MYMENSINGH - 11	ELECTRICAL SHOP - 1	18	3
	RANGAMATI - 10	PLUMBING AND PIPE FITTING - 1	10	1
	FARIDPUR - 8			
	BARISAL - 7			
	BIMT - 8			
TOTAL	235	18	235	39

SOURCE: DERIVED FROM ANNEXURE-10

iii) Instructors Training Programme was found to have a moderate contribution to the development of quality training while considering instructors performance in practical lessons.

C. Skill Competition Between TTCs.

i) Skill Competition on different trades between TTCs/BIMT was originated by JICA/JOCV and has appeared to be a regular event since 1986 participated by the best selective trainees of the second year. This competition is also a joint collaborative effort by BMET, TTCs and JOCVs. Main objectives of this competition are ;

- 1) Improvement of technical skills of TTCs and harmonizing training standard of different TTCs using different levels of training equipments/machineries.
- 2) Publicity and awareness building of TTC training programmes amongst the potential employers of TTC graduates, in particular, and raising social status of technical training, in general.

ii) Skill competition plays importantly in boosting moral and intellectual qualities of both the trainees and the trainers who want to demonstrate individual better performing abilities over the others.

iii) Since 1986 to 1993 five such skill competition on 13 trades were organized with commendable assistance by JICA and JOCVs, participated by a total number of 375 trainees. In all these events a total of 83 JOCVs have enthusiastically participated in a number of critical areas including as observers to ensure neutrality in winner selection and other organizational matters with their local counterparts. JOCVs have also practiced to prepare and maintain all records of each skill competition since its inception for reference (see reference Table-9).

D) Identification and procurement of equipments and teaching Aids.

E) Identification of suitable candidates to be sent to Japan for training.

TABLE NO. 9: SKILL COMPETITION TRAINING BETWEEN TTCS ASSISTED BY JOCVs (1986-93)

YEAR	NUMBER OF			NUMBER OF JOCVs INVOLVED
	TRADE	TTCs	TRAINEES	
1986 (First Competition)	Drafting Civil	5	5	16
	Drafting Mechanical	5	5	
	Electrical	9	9	
	R.A.C.	2	4	
	Radio & TV	2	4	
	Carpentry	5	5	
	Masonry	3	3	
	Turner	5	5	
	Machinist	5	5	
	Automotive	7	7	
	General Mechanics	9	9	
Welding	7	7		
1988 (Second Competition)	Drafting Civil	6	6	14
	Drafting Mechanical	4	4	
	Electrical	10	10	
	Refrigeration and Air-conditioning	2	4	
	Radio & TV	3	6	
	Carpentry	5	5	
	Masonry	1	1	
	Turner	6	6	
	Machinist	4	4	
	Automotive	10	10	
	General Mechanics	7	7	
	Welding	5	5	
	Pluming & Pipe Fitting	1	4	

YEAR	NUMBER OF			NUMBER OF JOCVs INVOLVED
	TRADE	TTCs	TRAINEES	
1989 (Third Competi- tion)	Drafting Civil	6	6	14
	Drafting Mechanical	5	5	
	Electrical	11	11	
	Refrigeration & Airconditioning	2	4	
	Radio & TV	4	4	
	Carpentry	5	5	
	Masonry	2	2	
	Turner	4	4	
	Machinist	4	4	
	Automotive	11	11	
	General Mechanics	9	9	
	Welding	5	5	
	Plumbing & Pipe Fitting	2	4	
1992 (Fourth Competi- tion)	Drafting Civil	6	6	22
	Drafting Mechanical	5	5	
	Electrical	11	11	
	Refrigeration & Airconditioning	3	6	
	Radio & TV	5	5	
	Carpentry	4	4	
	Masonry	4	4	
	Turner	5	5	
	Machinist	5	5	
	Automotive	11	11	
	General Mechanics	8	8	
	Welding	5	5	
	Plumbing & Pipe Fitting	3	6	
1993 (Fifth Competi- tion)	Drafting Civil	6	6	17
	Drafting Mechanical	3	3	
	Electrical	11	11	
	Refrigeration Air-Conditioning	3	6	
	Radio & TV	5	5	
	Carpentry	4	4	
	Masonry	3	3	
	Turner	5	5	
	Machinist	5	5	
	Automotive	11	11	
	General Mechanics	7	7	
	Welding	6	6	
	Pluming & Pipe Fitting	4	8	
	TOTAL =		375	83

SOURCE: DIFFERENT YEARS REPORTS ON SKILL COMPETITION,
JOCV LOCAL OFFICE, DHAKA.

CHAPTER 10

NGO EXPERIENCE IN TECHNICAL TRAINING PROGRAMME IN BANGLADESH

With the public sector involvement in the field of skill development training for lower level technicians, some NGOs are also operating in the same direction. They have proved to be quite effective and beneficial for such types of training programme. Programme and performances of such NGOs namely MAWTS and UCEP are briefly described in this chapter.

10.1 Mirpur Agricultural Workshop and Training School (MAWTS):

MAWTS as a project of CARITAS Bangladesh came into operation in 1973 for catering the needs of trained people, to be able to operate, maintain and repair agricultural machinery at the field level, and try to develop and produce new agricultural implements using traditional technology-base in the agricultural sector.

Presently four types of training courses as below are offered by MAWTS.

<u>Course</u>	<u>Trade</u>	<u>Duration</u>	<u>Intake Capacity</u>
Long-term Machine Course (LTMC)	Machinist Farm Machinery	3 years	50
Evening Trade Course (ETC)	Turning Welding Small Engine Machine Plumbing	1 year	10
Under Trainee Instructor (UTI)	Machinist Farm Machinery	1 year	70
Short Training Course (STC)	Welding Machinist Pump Operator Engine Mechanic Power Tiller Operator Industrial Maintenance	4-8 weeks	60

10.2 Long Term Trade Course (LTTTC) is purely a residential course. Rural boys of 16-18 years old having a general education up to class VIII to X are eligible for this course. Each trainee is entitled to get monthly stipend equal to Tk. 100.00 in the first year, Tk. 120.00 in the second year and Tk. 160.00 in the final year as pocket money, in addition to free residential accommodation, food and medical care.

Under Trainee Instructor Course (UTI) - Course is offered for the best passed-out trainees of LTTTC who will be, after completion, absorbed as trainers in MAWTS. They are given Tk. 1500.00 as stipend which includes everything without any additional facilities.

Evening Trade Course (ETC) - No educational qualification is required. It is aimed for young boys dwelling in different city slums and orphanages who are given some basic skill development training. This training is given free of cost.

Short Training Course (STC) is for rural boys, for a shorter duration, so as to make them able to operate and maintain agricultural and non-agricultural machineries are use in rural areas. In this course the cost of training is borne by the trainee.

10.3 The entire training programme of MAWTS is production-oriented. Theoretical part consists only 20% of the total training hours. This has a clear advantage over the non-production based training on the following reasons.

- i) Production oriented training improves the quality of outputs as it provides on-the-job training within the institutional boundary. This is proven by the fact that trainees passed from MAWTS are readily absorbed by almost 100% in the employment market including self-employment.
- ii) Products of the trainees have high market value as MAWTS is constantly diversifying its production base for quality products. The products are supplied to both rural and urban markets on commercial basis. This has provided a strong financial support for MAWTS to cover all training and other

expenses from their own funds making them self-reliant. Even funds generated are also being utilized for other similar programmes of MAWTS.

It can be noted that the machinery and equipments used for training and production are not very sophisticated and are easily repairable and cost of maintenance are low.

MAWTS also maintains a complete up to date file of its graduate for continuous feed-back and to monitor their employment situation. For employment of MAWTS graduates an "Income Generation Programme" is underway to support the graduates to find jobs and become self-employed to their nearby localities.

10.4 Underprivileged Children's Education Programme (UCEP):

UCEP is entirely financed by major donor agencies. Programme consists of three major components, namely (a) General School Programme, (b) Vocational Training Programme and (c) Employment Support Programme.

Important characteristics of UCEP is its approach towards a comprehensive development of adult under-privileged working girls and boys who otherwise would have been thrown to a deplorable situation in life, without having any formal education and skill development training.

General Education Programme consists of two levels of general education standard; (a) three years course of basic learning equivalent to class five of general education system. (b) another one year bridging course raising the standard up to class seven. On completion of the bridging course a student is qualified for vocational training programme or he/she can enroll in the general education system.

10.5 Vocational Training Programme is being carried over in vocational training centers (VTCs) located in Dhaka, Chittagong and Khulna. These centers enroll a total number of 900 trainees who have passed from several general schools located in the above districts run by UCEP. Variety of trades being offered in VTCs which include Electronics, Computer Compose, Garments, Tailoring,

Printing, Auto Repair, Welding and General Fitting, Textile, Electrical, Air Condition, Refrigeration, Carpentry, Metal Working, etc. First four trades are only meant for girls. Course duration (generally two to three years) and timing differs from one trade to another to make its suitable for the trainees who should not be, in any way, dis-linked from the income-earning activities.

During the training period every trainee is given a monthly gross stipend of Tk. 275.00 per month of which Tk. 50.00 is deducted and deposited against his/her name. After the completion of course term the entire of accumulated money is given back to the trainee as 'seed money' to aid self-employment.

UCEP trade curriculum is entirely based on the needs of the changing scenario of local markets with 20% training time for theory and 80% for practical exercises. Practical exercises include 50% of production-oriented training which, however, is not permitted for commercialisation of produced commodities as in the case of MAWTS.

10.6 Job Placement Activity of UCEP is targeted to guarantee employment for each of the passed out trainees who opt for better opportunities. Job placement component has its own network of suitable employers in the areas of UCEP operation. Regular contact with the employers, motivational campaign using different forums including media coverage are all important aspects as how UCEP tries to make all their graduates employed. If needed, UCEP also provides further technical training to their graduates for better performance in their jobs.

Both MAWTS and UCEP are basically aimed at providing skill development technical training closely linked with the job market within their limited institutional capabilities. Capacity utilization and employment are almost 100 per cent taking two of them together which is no doubt a unique example in Bangladesh as against low grade performance of TTCs and other Vocational Training Programme. Following are the important factors which directly contributed to the success achieved by the above two NGOs:

- a) Organizational autonomy for the overall institutional activities;

- b) Flexibility and adaptability of training programmes to the market and its changing behaviour;
- c) Selection of trainees from the economically depressed sections who have got aptitudes for such type of training and not only based on the educational background. MAWTS does not apply educational requirement for inclusion in two short term courses vis-a-vis similar types offers in TTCs;
- d) Training staff and administration are composed of highly motivated people who are continuously thriving for the fulfillment of organizational objectives;
- e) Trainers and other employees in both MAWTS and UCEP are being paid much higher salary compare to that of TTCs.

CHAPTER-11

OBSERVATIONS

11.1 Many of the young Instructors are generally graduates of Polytechnic Institutes. Newly appointed instructors are lacking in the experience of commercial production and thereby do not take interest in training and motivational activity. Senior instructors because of their status generally takes theoretical classes quite efficiently but the practical classes are taken by junior instructors, who generally lacks in experiences and capability.

11.2 A number of instructors were sent to Japan for training but on return their updated knowledge have not been properly utilized. In some cases initiative is not rewarded and only seniority is given recognition in case of promotion.

11.3 In case when a JOCV is not properly placed for a particular assignment to a TTC according to his/her professional qualification and experience, the administration rather accept his/her than to inform about the misplacement to be JOCV office or BMET. This is due to the fact that the administration of TTCs do not want to lose the JOCVs with the hope to get some equipment and machinery through the JOCV.

11.4 Quite a few Principals have come to their position by way of promotion and manage to keep the center functioning strictly within the guidelines of BMET. They follow whatever is imposed from the above and generally do not make any changes locally to suit the need of the situation without the prior approval from BMET. As such TTC administrations are not motivated to make any change of the situation which filters throughout the different ranks and disciples finally on the trainees.

11.5 Present remuneration package for TTC trainees is not enough to stimulate better performance and thereby to attract more qualified trainees. Lack of material incentives and administrative rigidity are responsible for poor quality of training.

11.6 Though officially a trainee after completion of two years course in TTC is believed to move to the level of skilled worker but in terms of level it is equivalent to semi-skilled worker.

11.7 Student unrest is for many TTCs is a critical problem creating session jam and adversely affecting quality training.

11.8 The gap between Principal and JICA/JOCV coordinators who are responsible to visit and investigate the placement and to know other problems often, with few exception, undermines the role of JOCVs in TTCs.

11.9 Different TTCs are using different types of machinery / equipment. Newly established TTCs are using more modern machinery for training compare to older TTC resulting difference in standards in terms of quality training even when using the same trade curriculum. There are machinery in old TTCs which are obsolete and not worth repairing.

11.10 It has been observed in trade course like carpentry, plumbing and machine not many students are showing interest. But these trades are very much required within the country.

11.11 From the discussion both with Principals, private entrepreneurs and some officials responsible for manpower developments for finding employment opportunities abroad, it appeared that the current situation now demands to introduce some new courses in different TTC's supported with required expertise and equipment.

CHAPTER-12

RECOMMENDATIONS

A. JICA

- a) JOCVs should go for additional technical based language training to perform their job for skills transfer effectively and efficiently.
- b) Before dispatching to TTCs, JOCVs should undergo in country orientation training particularly on the curriculum and the type of machinery and equipments are being used in the TTCs. Visit to manufacturers to know about the production technology used by the private entrepreneurs is essential.
- c) Frequent communications between JOCVs and the JOCV Coordinators in Dhaka Office should be given priority. Bi-annual meeting between BMET and JOCV Coordinators should take place to review the progress of the implementation of the programme. Moreover, JOCV Coordinators should visit TTCs on a regular programme and there by assist in resolving the issues hindering the efficient implementation of the programme in line with its objective. Their visit should be followed up by reports addressed to the principals and BMET for an effective linkage between JICA and BMET. This will improve the working condition between principal and JOCVs and follow-up assistance from JOCV/JICA and BMET.
- d) On receipt of the requests from Bangladesh side JOCV Coordinators should visit the TTCs to assess their needs and preferences of JOCVs for a particular discipline and communicate with Government of Bangladesh accordingly. JICA-Bangladesh should make some arrangement with BMET for reviewing the request and make preliminary selection of required trade courses for different TTC before processing the same at a higher level.
- e) A periodic self evaluation report following a standard format should be prepared by each JOCV and submit the same to the local office. Based on these periodic reports and also on the reports of the field visits JOCV local office may consider to produce a yearly report on JOCVs performance.

f) A follow-up study of this report should be undertaken in due course to ascertain the implementation progress of the recommendations highlighted here.

B. GOVERNMENT OF BANGLADESH AND JICA/JOCV

a) JOCV in association with local instructors should develop and impart a job oriented production based training utilizing the existing facilities of the respective TTC. In case of need JOCV should make an attempts to procure the required machinery and equipment to fill up deficiencies and there by make the programme a purposeful one. Programme of some of the NGOs can be considered in this regard.

b) A feasibility study should be conducted for establishing a Central Institute of Instructors Training (In-service and Pre-service) to improve the capabilities, quality, and up-dating of professional knowledge of the instructors of both TTC and VTI and also such other institutes, under the Technical and financial assistance of JICA. Senior JICA experts and also qualified local professionals should be employed as teaching specialists in this institute. This institute will definitely add to a better coordination and understanding of the working programme of JOCV and TTC. Detailed can be laid down in due course.

c) Considering of the employment situation both in-country and abroad some new courses be started in different TTC with the Technical Assistance of JICA supported with the dispatchment of JOCV along with the required equipment and workshop machinery under the intensive joint supervision of BMET and JICA. These course are mainly : Electronics, Air Conditioning, Refrigeration, Computer, Industrial Sewing, Machine Operator, Radio and TV, Garments, Deep Tubewell and Power Pump Mechanics and Food Processing. As a future plan of operation a detailed programme on the above aspects be formulated jointly by BMET and JICA on priority basis.

C. GOVERNMENT OF BANGLADESH

a) Existing remuneration package for trainers of TTCs be considered to increase as an incentive to the trainees.

- b) Recruitment of trainers be made having industrial experience. Refreshers training for trainers at least once in a year be organized locally and be conducted by senior level professionals. Foreign training be considered of a shorter duration and there by include more number of trainees for foreign training.
- c) Modern training aid be installed in all TTCs to help reduce lecture part and to ensure that the training does not suffer in any way due to both functional and administrative stringency.
- d) TTCs be given more functional autonomy and thereby to improve motivational aspect of TTC administration.
- e) Amount of the stipend of the trainees should be enhanced.
- f) In admission test more emphasis should be given on the aptitude of the candidates rather than simply qualifying them on education criterion particularly in case of part-time courses.
- g) A thorough review of the type of machinery for training in all TTCs should be undertaken to upgrade them in order to maintain a homogeneity in the level of training. This should be done keeping in view of their adaptability in practical fields. A system of maintenance for all types of machineries should be evolved.
- h) To meet the in-country demand some sorts of incentives and flexibility be given particularly for the trade courses like carpentry, plumbing and machinist. If required, the education qualification for admission in these courses be can kept up to the completion of Class V.
- i) One senior JICA expert is to be deputed to BMET for monitoring and guiding the activities of JOCVs and also extending required advises and support services for effective implementation of training programme of Technical Training Centers.

LIST OF THE ORGANIZATIONS AND PERSONS VISITED

BUREAU OF MANPOWER, EMPLOYMENT AND TRAINING (BMET)

Director Training Operations) Mr. Anwarul Karim Bhuiyan

TECHNICAL TRAINING CENTERS (TTCs)

Mirpur Mr. Md. Abdul Khaleque
Mirpur Bangla-German Mr. A.Md. Hassanuzzam
Principal
Chittagong Mr. Md. Sanjid Ali
Principal
Rajshahi Mr. Md. Serajul Islam Talukdar
Vice-Principal
Comilla Mr. Abdul Matin Bhuiyan
Vice-Principal
Bogra Mr. Md. Sanuallah Biswas
Principal
Mymensingh Mr. Ahmad Ziaul Karim
Principal
Faridpur Mr. A.H.M. Shamsuddoha
Principal

Bogra Vocational Teachers Training Institute (VTII)

Mr. Farid Uddin Ahmed
Vice-Principal

Non-Governmental Organization

Underprivileged Children Mr. Mahabubur Rashid
Education Programme (UCEP) Divisional Coordinator, DTS
Mirpur Agricultural Workshop Mr. Innocent D'Costa
and Training School (MAWTS) Manager (Training)
Mirpur Agricultural Workshop Mr. Md. Atiar Rahman
and Training School (MAWTS) Sr. Asstt. Manager (Training)
Swanirvar (Self-reliant) Bangladesh Mr. S.B. Barua
Director
Swanirvar (Self-reliant) Bangladesh Mr. Md. Maksud Alam
Chief Executive Officer

Export Processing Zones (EPZ) Authority

Bangladesh Export Processing Zones (EPZ) Authority	Mr. M. Kamal Akhtar General Manager
Bangladesh Export Processing Zones (EPZ) Authority	Mr. Abu Isa Faruq Haider Manager (Industrial Relations)

Japan International Cooperation Agency (JICA)

Mr. Hideo Morikawa	Deputy Resident Representative
Mr. Yojiro Ishii	Deputy Resident Representative

Japan Overseas Cooperation Volunteers (JOCV) local office

Mr. Shinobu Araki	Coordinator
Mrs. Miyuki Harui	Coordinator
Mrs. Chieko Yasuda	Coordinator
Ms. Tokiko Oikawa	Medical Coordinator
Mr. Masayuki Katsuta	Coordinator

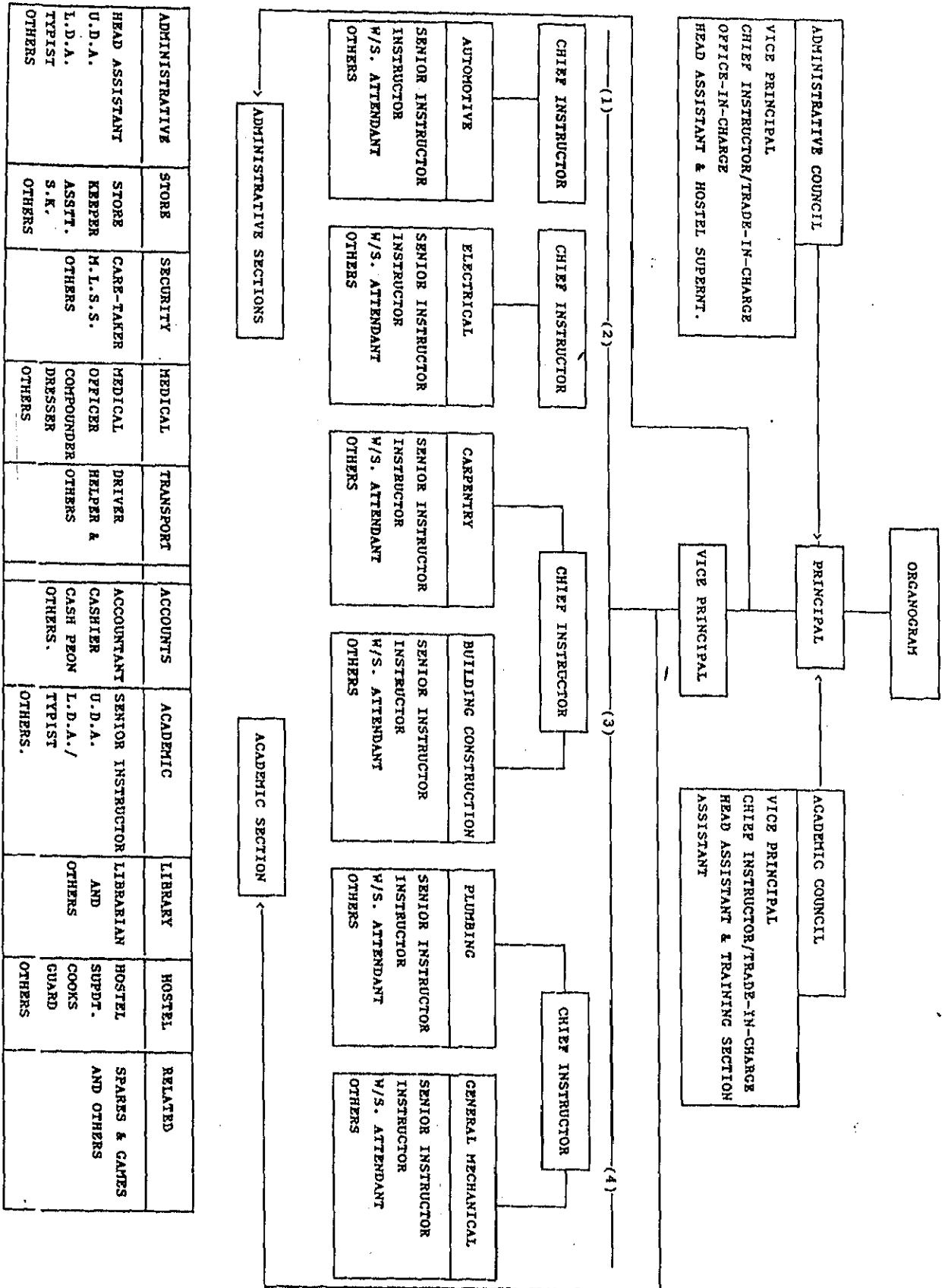
Local Staff at JICA

Mr. Ahsan (JOCV)	Program Officer
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Japan Overseas Cooperation Volunteers

	<u>TTC</u>
Naka Nakatsubo	Mirpur
Hiroshi Hamano	Mirpur
Tomoko Yamaguchi	Mirpur BG
Yukio Matsubara	Mymensingh
Tsuyoshi Arakichi	Chittagong
Eiji Ando	Chittagong
Yukio Matsubara	Rajshahi
Takashi Kurumizawa	Rajshahi
Seiichi Kusakabe	Rajshahi
Tamotsu Sakuma	Faridpur
Yoshiyuki Ishikawa	Khulna
Tsuneo Kurata	Khulna
Takashi Suzuki	Bogra

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
TECHNICAL TRAINING CENTER (T.T.C.)



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Annexure-1

Existing Sanctioned Instructional Strength, Trade-wise
Intake Capacity and Instructor-Trainee Ratio in each TTC.

NAME OF T.T.C.	INSTRUCTIONAL STRENGTH *	TRADE-WISE ANNUAL INTAKE CAPACITY	INSTRUCTOR TRAINEE RATIO
1. Mirpur TTC	117	i) Drafting Mechanical 60 ii) Drafting Civil 80 iii) Radio/TV 60 iv) Refrigeration & Air-Conditioning 90 v) Electrical 80 vi) General Mechanics 80 vii) Automotive 80 viii) Carpentry 90 ix) Welding 70 x) Masonry 60 xi) Machinist 50 xii) Turner 50	1:7
		Total (Institutional) 850	
2. Bangla-German TTC	92	i) Drafting Civil 50 ii) Drafting Mechanical 50 iii) Electrical 90 iv) Welding 70 v) Automotive 80 vi) General Mechanics 90 vii) Machinist 80 viii) Turner 50 ix) Masonry 60 x) Plumbing & Pipe Fitting 60 xi) Refrigeration & Air-Conditioning 60 xii) Radio/TV 60	1:8
		Total (Institutional) 760	
3. Chittagong TTC	81	i) Drafting Mechanical 60 ii) Drafting Civil 50 iii) Radio/TV 50 iv) Refrigeration & Air-Conditioning 50 v) Electrical 60 vi) Machinist 50 vii) Turner 50 viii) General Mechanics 60 ix) Carpentry 80 x) Welding 50 xi) Automotive 80 xii) Masonry 60	1:7
		Total (Institutional) 700	

NAME OF T.T.C.	INSTRUCTIONAL STRENGTH *	TRADE-WISE ANNUAL INTAKE CAPACITY	INSTRUCTOR TRAINEE RATIO
4. Khulna TTC	32	i) Electrical 70 ii) Carpentry 40 iii) Drafting Mechanical 40 iv) Drafting Civil 40 v) Welding 60 vi) General Mechanics 40 vii) Machinist 30 viii) Turner 30 ix) Plumbing and Pipe Fitting 30 x) Automotive 40 xi) Radio/TV 40 xii) Masonry 40	1:16
		Total (Institutional) 500	
5. Rajshahi TTC	42	i) Drafting Civil 60 ii) Drafting Mechanical 60 iii) Carpentry 60 iv) Welding 60 v) Electrical 80 vi) Machinist 40 vii) Turner 40 viii) General Mechanics 40 ix) Automotive 60 x) Masonry 60	1:13
		Total (Institutional) 560	
6. Rangamati TTC	28	i) Electrical 50 ii) Welding 50 iii) Carpentry 40 iv) General Mechanics 40 v) Automotive 40 vi) Masonry 40 vii) Dress Making 40 viii) Typing 40	1:12
		Total (Institutional) 340	
7. Faridpur TTC	20	i) Automotive 50 ii) General Mechanic 30 iii) Electrical 60 iv) Welding 50 v) Drafting Civil 40 vi) Turner 20 vii) Carpentry 40 viii) Masonry 40	1:16
		Total (Institutional) 330	

NAME OF T.T.C.	INSTRUCTIONAL STRENGTH *	TRADE-WISE ANNUAL INTAKE CAPACITY	INSTRUCTOR TRAINEE RATIO
8. Comilla TTC	32	i) Electrical 70 ii) General Mechanic 70 iii) Carpentry 70 iv) Automotive 60 v) Plumbing and Pipe Fitting 60 vi) Masonry 60 vii) Radio/TV 60	1:14
		Total (Institutional) 450	
9. Mymensingh TTC	26	i) General Mechanic 50 ii) Automotive 50 iii) Electrical 50 iv) Carpentry 50 v) Plumbing and Pipe Fitting 50 vi) Masonry 50	1:11
		Total (Institutional) 300	
10. Barisal TTC	20	i) General Mechanic 50 ii) Automotive 50 iii) Electrical 50 iv) Carpentry 40 v) Plumbing and Pipe Fitting 40 vi) Masonry 40	1:13
		Total (Institutional) 270	
11. Bogra TTC	26	i) General Mechanic 50 ii) Automotive 50 iii) Carpentry 50 iv) Plumbing and Pipe Fitting 50 v) Masonry 50	1:11
		Total (Institutional) 300	
TOTAL	516	5360	1:10

Source: Operation Manual for Technical Training Center, BMET, 1987.

* Instructional Strength only include Chief Instructor, Senior Instructor and Instructor. Principal, Vice-Principal and Arabic Teacher in some of the TTCs are not considered here as they do not directly involve in technical instructions.

ANNEX NO. 2 : YEAR-WISE CAPACITY UTILIZATION AND SUCCESSFUL
COMPLETION (1982-1993) OF 8 TTC

REGULAR COURSE

(IN PERCENTAGE)

T T C	1982			1983			1984			1985			1986			1987			1988		
	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF
MIRPUR	92	86	14	92	93	17	<--->	---	<--->	48	52	48	70	60	40	58	50	50	51	50	50
MIRPUR B G T T C	90	86	14	91	83	17	-	-	-	104	65	35	90	69	31	101	64	37	85	63	37
CHITTAGONG	136	77	29	125	74	26	115	87	13	58	83	17	63	60	40	55	52	48	68	51	49
MYMENSINGH	<--->	---	<--->	<--->	---	<--->	<--->	---	<--->	100	50	50	97	53	47	73	53	47	70	44	66
FARIDPUR	53	-	25	46	59	41	37	34	66	35	59	41	30	82	18	44	43	57	64	45	55
COMILLA	<--->	---	<--->	<--->	---	<--->	<--->	---	<--->	48	59	41	37	84	66	44	65	35	46	71	29
RAJSHAHI	71	72	28	90	71	29	<--->	---	<--->	72	60	40	70	36	64	103	41	59	106	36	64
BOGRA	<--->	---	<--->	<--->	---	<--->	<--->	---	<--->	<--->	---	<--->	60	27	73	77	49	51	65	68	32
BARISAL	<--->	---	<--->	<--->	---	<--->	<--->	---	<--->	33	61	39	45	66	34	56	60	40	50	61	39
TOTALS	90	77	23	92	81	19	85	78	22	58	61	39	68	55	45	70	54	67	67	54	46

* CU: CAPACITY UTILIZATION, P : PASSED, DF : DROP OUT/FAILED

REGULAR COURSE

T T C	1989			1990			1991			1992			1993			1982 - 1993		
	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF
MIRPUR	51	65	35	60	-	-	59	45	55	38	46	56	49	48	52	62	56	44
MIRPUR B G T T C	62	75	25	33	92	8	58	54	46	38	80	20	49	71	29	72	70	30
CHITTAGONG	70	46	54	96	-	-	66	67	33	83	55	45	42	62	38	82	59	41
MYMENSINGH	73	52	48	75	-	-	68	35	65	72	44	66	78	37	63	75	39	61
FARIDPUR	58	51	49	49	-	-	45	56	44	48	45	55	52	50	50	47	47	53
COMILLA	53	50	44	73	-	-	45	52	48	35	63	37	41	54	46	43	50	50
RAJSHAHI	76	42	58	91	28	72	70	39	61	77	51	49	74	-	-	81	44	56
BOGRA	24	57	43	40	60	40	37	78	72	70	59	41	66	74	25	30	53	47
BARISAL	54	62	38	66	37	63	47	52	48	71	64	36	67	-	-	55	49	51
TOTALS	59	59	41	67	11	89	58	47	53	53	56	44	55	46	54	66	55	45

ANNEX NO. 3: YEAR/TRADE COURSE WISE OF CAPACITY UTILIZATION
AND SUCCESSFUL COMPLETION OF DIFFERENT TTC

REGULAR COURSE

MIRPUR TTC

(IN PERCENTAGE)

TRADE COURSE	1982				1983				1984				1985				1986				1987			
	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S
DRAFTSMAN CIVIL	91	75	25	1/14	48	79	21	1/8	-	-	-	-	51	51	49	1/8	85	52	48	1/13	63	33	67	1/6
DRAFTSMAN MECHANICAL	88	90	10	1/12	81	55	45	1/10	-	-	-	-	48	17	83	1/12	56	20	80	1/7	43	65	35	1/4
AIR CONDITIONING	72	87	13	1/9	53	83	17	1/7	-	-	-	-	44	75	25	1/5	76	59	41	1/9	74	58	42	1/9
ELECTRICITY	85	83	17	1/13	106	90	10	1/14	-	-	-	-	35	28	72	1/4	78	53	47	1/10	78	55	45	1/10
RADIO ELECTRONICS	60	97	3	1/6	96	89	11	1/9	-	-	-	-	43	34	66	1/4	81	73	27	1/8	98	54	46	1/9
GENERAL MECHANICAL	83	87	13	1/10	86	75	25	1/11	-	-	-	-	58	49	51	1/6	72	56	44	1/8	38	37	63	1/4
AUTO MOTIVE	157	79	21	1/21	127	85	15	1/17	-	-	-	-	52	73	27	1/13	100	46	54	1/13	76	63	37	1/10
WOOD WORK	125	90	10	1/19	124	87	13	1/18	-	-	-	-	54	61	39	1/8	90	52	48	1/14	32	46	54	1/4
WELDING	97	91	9	1/14	111	96	4	1/14	-	-	-	-	51	50	50	1/6	74	62	38	1/9	54	34	66	1/6
MASONRY	93	89	11	1/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MACHINIST	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TURNER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PLUMBING (SANITARY)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POUNDRY/ROBING	17	0	100	1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL %	92	86	14	-	92	83	17	-	-	-	-	-	48	52	48	-	70	60	40	-	58	50	50	-

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUTS/FAILED, T/S : TRAINER/STUDENT RATIO

* 1984 STUDENT STRIKE DISRUPTED ALL COURSES

* 1990 STUDENT STRIKE DISRUPTED FINAL EXAMS IN ALL COURSES

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993		
	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	CU	P	D/P	
DRAFTSMAN CIVIL	73	37	63	1/10	52	59	41	1/7	63	-	-	-	66	64	36	1/8	38	29	71	1/5	46	40	60	1/5	62	49	51
DRAFTSMAN MECHANICAL	25	46	54	1/3	11	71	29	1/1.4	39	-	-	-	33	55	45	1/4	16	60	40	1/2	18	45	55	1/2	42	50	50
AIR CONDITIONING	67	54	46	1/9	92	74	26	1/12	100	-	-	-	100	41	59	1/11	66	55	45	1/8	33	54	46	1/7.6	74	55	45
ELECTRICITY	80	54	46	1/9	71	75	25	1/8	90	-	-	-	78	69	31	1/7	71	31	69	1/6	78	50	50	1/7	78	56	46
RADIO ELECTRONIC	100	56	44	1/10	125	72	18	1/12	120	-	-	-	121	46	54	1/10	73	65	35	1/6	100	81	19	1/6	93	60	40
GENERAL MECHANICAL	36	29	71	1/4	30	52	48	1/3	40	-	-	-	39	21	79	1/4	15	50	50	1/2	28	38	62	1/3	47	52	48
AUTO MOTIVE	57	63	37	1/7	71	52	48	1/95	75	-	-	-	77	35	45	1/9	60	37	63	1/7	72	32	68	1/8	84	55	45
WOOD WORK	8	43	57	1/1	4	75	25	1/1.5	16	-	-	-	12	55	45	1/2	10	67	33	1/2	4	75	25	1/1	84	71	29
WELDING	31	71	23	1/4	37	50	50	1/5	37	-	-	-	37	23	77	1/4	23	44	56	1/3	57	25	75	1/6	56	59	41
MASONRY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83	89	11
MACHINIST	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TURNER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PLUMBING (SANITARY)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
POUNDRY/ROEING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	0	100
TOTAL X	51	50	50	-	51	65	35	-	60	-	-	-	59	45	55	-	38	46	54	-	49	48	52	-	62X	56X	45X

C/P : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUTS/FAILED, T/S : TRAINER/STUDENT RATIO

REGULAR COURSE
 HIRPUR RG TIG

RESULT IN PERCENTAGE

TRADE COURSE	1982				1983				1984				1985				1986				1987			
	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S
DRAFTSMAN CIVIL	101	69	31	1/7	106	89	11	1/7	-	-	-	-	120	70	30	1/3	92	70	30	1/7	100	66	34	1/7
DRAFTSMAN MECHANICAL	48	36	64	1/8	86	60	40	1/7	-	-	-	-	68	58	42	1/3	90	69	31	1/7	111	64	36	1/9
AIR CONDITIONING	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---
ELECTRICITY	100	95	5	1/13	79	92	8	1/10	-	-	-	-	100	56	44	1/6	89	84	16	1/11	103	68	32	1/13
RADIO ELECTRONICS	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---
GENERAL MECHANICAL	93	86	14	1/16	107	78	22	1/16	-	-	-	-	156	70	30	1/12	133	73	27	1/20	120	58	42	1/18
AUTO MOTIVE	100	98	2	1/8	128	92	8	1/10	-	-	-	-	113	60	40	1/8	88	49	51	1/11	114	77	23	1/15
WOOD WORK	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---
PLUMBING (SANITARY)	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	70	66	34	1/9	94	68	32	1/12
MASONRY	<---	<---	<---	<---	100	76	24	1/6	-	-	-	-	67	65	35	1/8	68	66	34	1/10	<---	<---	<---	<---
MACHINIST	70	76	24	1/7	56	64	36	1/9	-	-	-	-	100	56	44	1/8	90	71	29	1/15	92	57	43	1/15
TURNER	90	93	7	1/6	64	88	12	1/6	-	-	-	-	100	76	24	1/5	90	62	38	1/9	99	78	22	1/10
WELDING	<---	<---	<---	<---	101	98	2	1/6	-	-	-	-	86	73	27	1/8	67	77	23	1/12	70	41	59	1/12
DRESS MAKING	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---
TOTAL %	90	86	14	-	91	83	17	-	-	-	-	-	104	65	35	-	90	69	31	-	101	54	37	-

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUTS/FAILED, T/S : TRAINER/STUDENT RATIO

* 1984 STUDENT STRIKE DISRUPTED ALL COURSES

* 1990 DRESS MAKING COURSE WAS NOT DISRUPTED

* 1990 STUDENT STRIKE DISRUPTED FINAL EXAMS IN ALL COURSES

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993		
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	CU	P	DF	
DRAFTSMAN CIVIL	101	62	38	1/7	76	89	11	1/5	-	-	-	-	108	74	26	1/8	68	88	12	1/5	80	55	45	1/6	94	73	27
DRAFTSMAN MECHANICAL	84	55	45	1/13	26	92	8	1/2	-	-	-	-	40	65	35	1/3	20	300	0	1/1	36	56	44	1/3	60	72	28
AIR CONDITIONING	-	-	-	-	73	100	0	1/3	-	-	-	-	75	71	29	1/6	52	35	65	1/5	90	78	22	1/8	72	70	30
ELECTRICITY	93	73	27	1/12	78	83	17	1/10	-	-	-	-	79	49	51	1/10	67	90	10	1/9	81	69	31	1/10	86	80	20
RADIO ELECTRONIC	-	-	-	-	-	-	-	-	-	-	-	-	50	73	27	1/4	38	65	35	1/6	51	90	10	1/8	46	78	22
GENERAL MECHANICAL	82	55	45	1/12	57	37	63	1/9	-	-	-	-	24	50	50	1/3	10	56	44	1/2	17	40	60	1/2	76	68	32
AUTO MOTIVE	93	59	41	1/12	64	73	27	1/8	-	-	-	-	66	43	57	1/9	51	59	41	1/7	73	67	33	1/9	85	68	32
HOOD ROBE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PLUMBING (SANITARY)	90	58	42	1/11	36	67	33	1/5	-	-	-	-	42	19	81	1/5	16	38	62	1/2	34	82	18	1/1	55	60	40
MASONRY	38	83	17	1/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	72	28
MACHINIST	84	40	60	1/14	118	69	31	1/20	-	-	-	-	44	41	59	1/7	30	87	13	1/5	30	93	7	1/5	70	59	41
TURNER	102	52	48	1/10	54	70	30	1/6	-	-	-	-	46	57	43	1/5	30	67	33	1/3	30	100	0	1/3	68	72	28
WELDING	70	69	31	1/12	49	62	38	1/9	-	-	-	-	36	40	60	1/6	14	80	20	1/3	24	53	47	1/4	52	64	36
Dress Making	100	93	7	1/20	50	90	10	1/10	-	-	-	-	95	55	45	1/19	63	95	5	1/9	17	100	0	1/2	68	81	19
TOTAL %	85	63	37	-	75	63	37	-	-	-	-	-	56	27	73	-	38	80	20	-	49	18	82	-	73	71	29

C/U : CAPACITY UTILIZATION, P : PASSED, D/R : DROP OUTS/FAILED, T/S : TRAINER STUDENT RATIO

REGULAR COURSE

CHITTAGONG TTC

(IN PERCENTAGE)

TRADE COURSE	1982					1983					1984					1985					1986					1987					
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S			
DEFTSMAN CIVIL	160	73	27	1/20	156	44	56	1/8	160	78	22	1/13	108	100	0	1/9	60	80	20	1/7	80	45	55	1/10							
DEFTSMAN MECHANICAL	70	67	33	1/10	60	72	28	1/18	43	69	31	1/7	17	80	20	1/2	50	60	40	1/8	27	38	62	1/3							
AIR CONDITIONING	160	80	20	1/40	184	70	30	1/46	156	87	13	1/20	72	100	0	1/9	112	46	54	1/7	104	46	54	1/7							
ELECTRICITY	180	73	27	1/45	157	96	4	1/47	140	95	5	1/8	70	100	0	1/4	57	88	12	1/4	83	40	60	1/14							
RADIC ELECTRONICS	120	67	33	1/15	112	75	25	1/28	132	91	9	1/8	48	100	0	1/3	100	48	52	1/6	52	85	15	1/3							
GENERAL MECHANICAL TURNER MACHINIST	140	67	33	1/16	93	72	28	1/7	70	91	9	1/8	31	72	28	1/3	46	62	30	1/5	30	54	46	1/3							
AUTO MOTIVE	113	69	31	1/22	110	70	30	1/13	138	84	16	1/14	78	48	52	1/5	75	53	47	1/8	63	60	40	1/6							
WOOD WORK	<---																														
PLUMBING (SANITARY)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MASONRY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MACHINIST	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TURNER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WELDING	160	75	25	1/20	212	85	15	1/26	180	89	11	1/6	88	82	18	1/3	36	56	44	1/2	<---										
TOTAL %	136	71	29	-	125	74	26	-	115	87	13	-	58	83	17	-	63	60	40	-	55	52	48	-							

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUTS/FAILED, T/S : TRAINER/STUDENT RATIO
 * 1990 STUDENT STRIKE DISRUPTED FINAL EXAMS IN ALL COURSES

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993			
	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	
DRAFTSMAN CIVIL	64	38	62	1/8	56	29	71	1/3	80	-	-	1/7	60	73	27	1/5	96	58	42	1/8	44	45	55	1/4	94	59	41	
DRAFTSMAN MECHANICAL	43	31	69	1/4	30	22	78	1/3	37	-	-	1/3	17	80	20	1/1	37	82	18	1/4	3	100	-	5/1	36	55	45	
AIR CONDITIONING	112	39	61	1/6	168	43	57	1/8	172	-	-	1/14	136	56	44	1/9	136	62	38	1/11	100	84	16	1/4	134	57	43	
ELECTRICITY	80	50	50	1/5	103	34	66	1/6	177	-	-	1/13	117	74	26	1/9	120	81	19	1/9	87	69	31	1/4	113	64	36	
RADIO ELECTRONIC	112	50	50	1/5	80	60	40	1/6	152	-	-	1/12	144	83	17	1/15	100	68	32	1/14	56	71	29	1/3	101	63	37	
GENERAL MECH. TURNER MACHINE	50	85	15	1/7	55	64	36	1/5	69	-	-	1/6	24	68	32	1/2	64	41	59	1/5	19	27	73	1/2	58	60	40	
AUTO MOTIVE	63	32	68	1/8	60	54	46	1/5	140	-	-	1/9	83	45	55	1/6	90	31	69	1/7	48	63	37	1/3	88	50	50	
WOOD WORK	<---								>---																			
PLUMBING (SANITARY)																												
MASONRY									17	-	-	1/5																
MACHINIST																												
TURNER																												
WELDING					52	23	77	1/2	68	-	-	1/3	36	67	33	1/2	56	36	64	1/2	24	33	67	1/2	76	68	32	
TOTAL %	68	51	49	-	70	46	54	-	96	-	-	-	66	67	33	-	83	55	45	-	42	62	38	-	82	59	41	

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUTS/FAILED, T/S : TRAINER/STUDENT RATIO

MIRJENSINGH TTC

(IN PERCENTAGE)

TRADE COURSE	1982			1983			1984			1985			1986			1987		
	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S		
DRAFTSMAN CIVIL	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
DRAFTSMAN MECHANICAL	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
AIR CONDITIONING	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
ELECTRICITY	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
RADIO ELECTRONICS	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
GENERAL MECHANICAL	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
AUTO MOTIVE	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
HOOD WORK	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
PLUMBING (SANITARY)	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
HASONRY	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
HACHINIST	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
TURNER	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
WELDING	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---		
TOTAL %						100	50	50	-	97	53	47	-	73	53	47		

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUTS/FAILED, T/S : TRAINER STUDENT RATIO

* MIRJENSINGH DID NOT COMMENCE ENROLLMENTS UNTIL 1985

* 1990 STUDENT STRIKE DISRUPTED FINAL EXAMS IN ALL COURSES

TRADE COURSE	1986				1989				1990				1991				1992				1993				1952-1993			
	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	CU	P	D/F		
DRAFTSMAN CIVIL	<---																											
DRAFTSMAN MECHANICAL	<---																											
AIR CONDITIONING	<---																											
ELECTRICITY	50	28	72	1/8	100	26	74	1/16	100	-	-	1/25	100	42	59	1/10	108	67	33	1/9	108	67	33	1/9	89	44	56	
RADIO ELECTRONIC	<---																											
GENERAL MECHANICAL	90	58	42	1/11	114	61	39	1/14	98	-	-	1/16	94	36	64	1/12	112	29	71	1/11	112	67	33	1/9	101	41	59	
AUTO MOTIVE	86	67	33	1/10	82	80	20	1/10	92	-	-	1/10	112	41	59	1/14	108	28	72	1/11	108	28	72	1/11	99	41	59	
WOOD WORK	86	28	72	1/10	38	42	58	1/6	38	-	-	1/6	16	50	50	1/3	16	38	62	1/3	20	40	60	1/3	38	43	57	
PLUMBING (SANITARY)	<---								52	-	-	1/13	48	8	92	1/24	48	50	50	1/12	64	13	87	1/16	53	19	81	
MASONRY	38	16	84	1/10	30	33	67	1/5	60	-	-	1/15	40	25	75	1/10	40	60	40	1/6	54	44	56	1/9	47	34	46	
MACHINIST	<---																											
TURNER	<---																											
WELDING	<---																											
TOTAL %	70	44	66	-	73	52	48	-	75	-	-	-	68	35	65	-	72	44	66	-	78	37	63	-	75	39	61	

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUTS/FAILED, T/S : TRAINER/STUDENT RATIO

TRADE COURSE	1982				1983				1984				1985				1986				1987				
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	
	<---																								
DRAFTSMAN CIVIL	<---																								
DRAFTSMAN MECHANICAL	<---																								
AIR CONDITIONING	<---																								
ELECTRICITY	46	-	21	1/7	47	74	26	1/6	33	-	-	1/6	45	48	52	1/9	33	75	25	1/6	43	35	65	1/9	
RADIO ELECTRONICS	<---																								
GENERAL MECH./TURNER	73	-	25	1/6	57	70	30	1/6	67	-	-	1/6	27	38	62	1/3	10	50	50	1/1	37	18	82	1/4	
AUTO MOTIVE	<---				50	-	8	1/6	30	58	42	1/4	54	70	30	1/7	40	90	10	1/5	62	61	39	1/8	
WOOD WORK	53	-	29	1/21	38	67	33	1/15	30	-	-	1/12	3	0	100	1/1	<---								
PLUMBING (SANITARY)	<---																								
MASONRY	<---																								
MACHINIST	<---																								
TURNER	<---																								
WELDING	<---																								
TOTAL %	53	-	25	-	46	59	41	-	37	34	66	-	35	59	41	-	30	82	18	-	44	43	57	-	

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

* 1984 STUDENT STRIKE DISRUPTED ALL COURSE EXCEPT AUTO MOTIVE WHICH WAS COMPLETED IN FEBRUARY

* 1990 STUDENT STRIKE DISRUPTED FINAL EXAMS IN ALL COURSES

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993			
	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	
DEAFTHAN CIVIL	63	40	60	1/8	48	53	47	1/6	33	-	-	1/4	25	70	30	1/3	23	56	44	1/3	35	36	64	1/5	37	40	60	
DRAFTSMAN MECHANICAL	<---																											
AIR CONDITIONING	<---																											
ELECTRICITY	60	50	50	1/12	75	58	42	1/15	73	-	-	1/14	53	78	22	1/11	55	55	45	1/11	55	52	48	1/11	51	49	51	
RADIO ELECTRONIC	<---																											
GENERAL MECHANICAL	30	33	67	1/3	13	25	75	1/1	7	-	-	1/1	23	0	100	1/2	37	36	64	1/4	60	39	61	1/6	36	38	62	
AUTO MOTIVE	100	56	44	1/12	74	54	46	1/9	74	-	-	1/8	66	61	39	1/8	70	34	66	1/9	62	74	26	1/8	61	54	46	
WOOD WORK	<---																											
PLUMBING (SANITARY)	<---																											
MASONRY	<---																											
MACHINIST	<---																											
TURNER	<---																											
WELDING	56	29	71	1/7	58	31	69	1/7	38	-	-	1/5	44	27	73	1/6	44	45	55	1/6	48	33	67	1/6	44	38	62	
TOTAL X	64	45	55	-	58	51	49	-	49	-	-	-	45	56	44	-	48	45	35	-	52	50	50	-	47	47	53	

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

(IN PERCENTAGE)

TRADE COURSE	1982			1983			1984			1985			1986			1987					
	CU	P	DR	T/S	CU	P	DR	T/S	CU	P	DR	T/S	CU	P	DR	T/S	CU	P	DR	T/S	
DRAFTSMAN CIVIL	<---																				
DRAFTSMAN MECHANICAL	<---																				
AIR CONDITIONING	<---																				
ELECTRICITY	<---																				
RADIO ELECTRONICS	<---																				
GENERAL MECHANICAL	<---																				
AUTO MOTIVE	<---																				
WOOD WORK	<---																				
PLUMBING (SANITARY)	<---																				
MASONRY	<---																				
MACHINIST	<---																				
TURNER	<---																				
WELDING	<---																				
TOTAL %																					

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUT/PAILED, T/S : TRAINER/STUDENT RATIO.

* TRAINER/STUDENT RATIO ARE NOT SHOWN DUE TO LACK OF INFORMATION SUPPLIED

* 1985 COMILLA COMMENCED ENROLLMENTS

* 1990 STUDENT STRIKE DISRUPTED FINAL EXAMS IN ALL COURSES

TRADE COURSE	1988			1989			1990			1991			1992			1993			1982-1993									
	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S								
DRAFTSMAN CIVIL	<---																											
DRAFTSMAN MECHANICAL	<---																											
AIR CONDITIONING	<---																											
ELECTRICITY	66	83	17	1/	60	57	43	1/	51	-	-	1/	51	53	47	1/	54	45	56	1/	57	40	60	1/	54	51	49	
RADIO ELECTRONIC	60	53	47	1/	62	49	51	1/	60	-	-	1/	60	58	42	1/	45	74	26	1/	47	46	54	1/	45	53	67	
GENERAL MECHANICAL	26	67	33	1/	30	62	38	1/	36	-	-	1/	36	40	60	1/	33	65	35	1/	46	66	34	1/	35	52	48	
AUTO MOTIVE	58	80	20	1/	65	59	41	1/	63	-	-	1/	57	56	44	1/	58	49	51	1/	62	57	43	1/	57	49	51	
WOOD WORK	6	0	100	1/	<---			>	6	-	-	1/	6	0	100	1/	6	50	50	1/	10	86	14	1/	23	52	48	
PLUMBING (SANITARY)	<---																											
MASONRY	<---																											
MACHINIST	<---																											
TURNER	<---																											
WELDING	<---																											
TOTAL %	46	71	29	-	53	56	44	-	73	-	-	-	45	52	48	-	35	63	37	-	41	54	46	-	43	50	50	

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

TRADE COURSE	1982					1983					1984					1985					1986					1987				
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S						
DRAPTSMAN CIVIL	47	54	46	1/5	77	78	22	1/5	-	-	-	-	83	68	32	1/5	100	63	37	1/6	110	36	64	1/6						
DRAFTSMAN MECHANICAL	17	70	30	1/3	13	75	25	1/1	-	-	-	-	43	31	69	1/4	43	15	85	1/4	100	30	70	1/10						
AIR CONDITIONING	<---	---	---	---	---	---	---	---	>---	>---	>---	>---	<---	---	---	---	---	---	---	---	---	---	---	---						
ELECTRICITY	106	94	6	1/17	153	77	23	1/12	-	-	-	-	83	45	55	1/6	108	47	53	1/8	110	64	36	1/9						
RADIO ELECTRONICS	<---	---	---	---	---	---	---	---	>---	>---	>---	>---	<---	---	---	---	---	---	---	---	---	---	---	---						
GENERAL MECHANICAL	70	11	89	1/7	90	39	61	1/5	-	-	-	-	95	58	42	1/5	75	33	67	1/4	110	59	41	1/5						
AUTO MOTIVE	97	69	31	1/15	120	72	28	1/9	-	-	-	-	97	72	28	1/7	103	26	74	1/8	117	54	46	1/9						
WOOD WORK	38	74	26	1/6	30	56	44	1/2	-	-	-	-	33	50	50	1/2	30	33	67	1/2	80	67	33	1/6						
PLUMBING (SANITARY)	<---	---	---	---	---	---	---	---	>---	>---	>---	>---	<---	---	---	---	---	---	---	---	---	---	---	---						
MASONRY	<---	---	---	---	---	---	---	---	>---	>---	>---	>---	<---	---	---	---	---	---	---	---	---	---	---	---						
MACHINIST	70	43	57	1/7	95	79	21	1/5	-	-	-	-	53	29	71	1/5	85	29	71	1/4	105	33	67	1/5						
TURNER	75	93	7	1/10	120	54	46	1/8	-	-	-	-	50	60	40	1/7	65	23	77	1/4	110	14	86	1/7						
WELDING	110	83	17	1/13	103	81	19	1/6	-	-	-	-	70	81	19	1/4	67	25	75	1/4	120	28	72	1/13						
TOTAL %	71	72	28	-	90	71	29	-	-	-	-	-	72	60	40	-	70	36	64	-	103	41	64	-						

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

* 1982 RAJSHAHI COMPLETED TWO (6) MONTH COURSES, THE RESULTS ARE A COMBINATION OF BOTH COURSES

* 1984 STUDENT STRIKE DISRUPTED ALL COURSES

TRADE COURSE	1988					1989					1990					1991					1992					1993					1982-1993		
	CU	P	D/R	T/S	CU	P	D/R	T/S	CU	P	D/R	T/S	CU	P	D/R	T/S	CU	P	D/R	T/S	CU	P	D/R	T/S	CU	P	D/R	CU	P	D/R			
DRAFTSMAN CIVIL	107	13	87	1/6	107	34	66	1/6	107	28	72	1/6	41	86	14	1/3	88	47	53	1/7	77	-	-	1/5	85	43	57						
DRAFTSMAN MECHANICAL	110	42	58	1/11	60	44	56	1/6	90	22	78	1/9	13	25	75	1/1	30	78	22	1/3	30	-	-	1/3	39	44	56						
AIR CONDITIONING	<---																																
ELECTRICITY	103	63	37	1/8	140	48	52	1/11	113	60	40	1/9	105	60	40	1/8	110	70	30	1/9	110	-	-	1/9	56	61	39						
RADIO ELECTRONIC	<---																																
GENERAL MECHANICAL	110	41	59	1/5	55	73	27	1/3	100	20	80	1/5	100	20	80	1/5	100	75	25	1/5	105	-	-	1/5	90	37	63						
AUTO MOTIVE	107	31	69	1/8	103	26	74	1/8	107	34	66	1/8	120	8	92	1/9	117	54	46	1/9	110	-	-	1/8	118	43	57						
WOOD WORK	107	47	53	1/8	53	63	37	1/4	80	4	96	1/6	10	100	0	1/1	20	83	17	1/2	7	-	-	1/1	44	51	49						
PLUMBING (SANITARY)	<---																																
MASONRY	107	44	56	1/16	43	23	77	1/6	43	8	92	1/6	<---				17	20	80	1/3	43	-	-	1/7	48	20	80						
HACHINIST	85	41	59	1/4	35	29	71	1/2	80	31	69	1/4	80	25	75	1/4	100	45	55	1/5	75	-	-	1/4	82	37	63						
TURNER	115	4	96	1/8	35	43	57	1/2	105	10	90	1/7	95	47	53	1/6	115	13	87	1/8	110	-	-	1/7	93	34	66						
WELDING	107	19	81	1/6	<---				83	20	80	1/5	73	36	64	1/4	63	21	79	1/4	83	-	-	1/5	90	45	55						
TOTAL %	106	36	64	-	76	42	58	-	91	28	72	-	70	39	62	-	77	51	49	-	74	-	-	-	81	44	56						

C/U : CAPACITY UTILIZATION, P : PASSED, D/R : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

REGULAR COURSE

BOGRA TTC

ANNEX NO. 3

(IN PERCENTAGE)

TRADE COURSE	1982				1983				1984				1985				1986				1987				
	CU	P	DR	T/S	CU	P	DR	T/S	CU	P	DR	T/S	CU	P	DR	T/S	CU	P	DR	T/S	CU	P	DR	T/S	
DRAFTSMAN CIVIL	<																								
DRAFTSMAN MECHANICAL	<																								
AIR CONDITIONING	<																								
ELECTRICITY	<																								
RADIO ELECTRONICS	<																								
GENERAL MECHANICAL	<																								
AUTO MOTIVE	<																								
WOOD WORK	<																								
PLUMBING (SANITARY)	<																								
MASONRY	<																								
MACHINIST	<																								
TURNER	<																								
WELDING	<																								
TOTAL %	-	-	-	-	-	-	-	-	-	-	-	-	60	27	73	-	77	49	51	-					

C/U : CAPACITY UTILIZATION, P : PASSED, D/R : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

* BOGRA TTC DID NOT COMMENCE OPERATION UNTIL 1986

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993		
	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	P	DP		
DRAFTSMAN CIVIL	<---																										
DRAFTSMAN MECHANICAL	<---																										
AIR CONDITIONING	<---																										
ELECTRICITY	106	100	0	1/13	66	58	42	1/8	68	88	12	1/11	96	23	77	1/16	112	66	34	1/18	114	65	35	1/15	91	58	42
RADIO ELECTRONIC	<---																										
GENERAL MECHANICAL	82	51	49	1/10	64	66	34	1/8	48	54	46	1/6	62	52	48	1/8	104	81	19	1/13	94	10	90	1/9	79	65	34
AUTO MOTIVE	106	64	36	1/13	50	48	52	1/6	60	50	50	1/8	88	14	86	1/9	100	40	60	1/10	92	87	13	1/12	80	47	53
WOOD WORK	28	64	36	1/5	24	83	17	1/4	22	45	55	1/4	18	22	78	1/2	16	75	25	1/2	34	35	65	1/8	29	46	54
PLUMBING (SANITARY)	46	30	70	1/23	50	40	60	1/12	36	50	50	1/9	66	33	67	1/11	72	36	64	1/12	56	46	54	1/7	54	39	61
MASONRY	20	60	40	1/5	12	67	33	1/3	6	33	67	1/1	12	33	67	1/2	14	86	14	1/2	20	60	40	1/5	24	48	52
MACHINIST	<---																										
TURNER	<---																										
WELDING	<---																										
TOTAL %	65	68	32	-	44	57	43	-	40	60	40	-	57	28	72	-	70	59	41	-	66	74	26	-	60	53	47

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUT/PAIRED, T/S : TRAINER/STUDENT RATIO.

REGULAR COURSE

BARISAL TTC

ANNEX NO. 3

(IN PERCENTAGE)

TRADE COURSE	1982				1983				1984				1985				1986				1987				
	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	
DRAFTSMAN CIVIL	<---																								
DRAFTSMAN MECHANICAL	<---																								
AIR CONDITIONING	<---																								
ELECTRICITY	<---												32	75	25	1/8	58	66	34	1/7	64	66	36	1/8	
RADIO ELECTRONICS	<---																								
GENERAL MECHANICAL	<---												32	63	37	1/16	58	74	26	1/14	64	75	25	1/16	
AUTO MOTIVE	<---																40	70	30	1/5	76	61	39	1/9	
WOOD WORK	<---																18	57	43	1/3	33	31	69	1/6	
PLUMBING (SANITARY)	<---																								
MASONRY	<---																48	55	42	1/19	33	38	62	1/6	
MACHINIST	<---																								
TURNER	<---																								
WELDING	<---																								
TOTAL %	-	-	-	-	-	-	-	-	-	-	-	33	61	39	-	45	66	34	-	56	60	40	-	-	

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.
 * ENROLLMENTS COMMENCED AT BARISAL TTC IN 1985

TRADE COURSE	1988				1989				1990				1991				1992				1993			1982-1993			
	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	T/S	CU	P	D/F	CU	P	D/F					
DRAFTSMAN CIVIL	<---																										
DRAFTSMAN MECHANICAL	<---																										
AIR CONDITIONING	<---																										
ELECTRICITY	88	70	30	1/11	82	76	24	1/10	82	54	46	1/10	78	77	23	1/13	92	54	46	1/11	108	-	-	1/15	76	56	44
RADIO ELECTRONIC	<---																										
GENERAL MECHANICAL	52	31	69	1/13	66	42	58	1/16	72	17	83	1/12	36	28	72	1/6	50	48	52	1/5	60	-	-	1/10	54	41	59
AUTO MOTIVE	70	74	26	1/9	72	72	28	1/9	88	43	57	1/11	82	39	61	1/10	92	70	30	1/11	95	-	-	1/12	77	50	50
WOOD WORK	10	25	75	1/2	13	40	60	1/2	30	17	83	1/4	3	0	100	4/1	<---				15	-	-	1/3	17	27	73
PLUMBING (SANITARY)	<---																										
MASONRY	15	67	33	1/3	25	40	60	1/5	48	37	63	1/10	20	63	37	1/4	43	100	-	1/5	38	-	-	1/8	34	49	51
MACHINIST	<---																										
TURNER	<---																										
WELDING	<---																										
TOTAL %	50	61	39	-	54	62	38	-	66	37	63	-	47	52	48	-	71	64	36	-	67	-	-	-	55	49	51

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

ANNEX NO. 4 : YEAR-WISE CAPACITY UTILIZATION AND SUCCESSFUL
COMPLETION (1982-1993) OF 8 TTC

PART TIME COURSE

(IN PERCENTAGE)

T T C	1982			1983			1984			1985			1986			1987			1988		
	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF			
MIRPUR	<---	---	--->	33	66	34	<---	---	<---	48	79	21	79	72	28	61	53	47	62	54	46
MIRPUR B G T T C	64	96	4	74	79	21	68	86	14	67	71	29	70	75	25	60	65	35	63	64	36
CHITTAGONG	69	70	30	64	73	27	52	88	12	58	82	18	81	68	32	66	68	32	55	92	8
COMILLA	<---	---	--->	-	88	12	-	77	23	<---	---	--->	<---	---	--->	<---	---	---	<---	---	---
FARIDPUR	<---	---	--->	<---	---	--->	<---	---	--->	-	52	48	-	48	52	-	58	42	-	25	75
RAJSHAHI	<---	---	--->	<---	---	--->	<---	---	--->	<---	---	--->	<---	---	--->	<---	---	---	<---	---	---
BOGRA	<---	---	--->	<---	---	--->	<---	---	--->	<---	---	--->	<---	---	--->	<---	---	---	<---	---	---
BARISAL	<---	---	--->	<---	---	--->	<---	---	--->	79	58	42	<---	---	--->	46	94	6	<---	---	---
TOTALS	68	76	24	77	73	27	65	86	14	69	72	28	86	67	33	73	65	35	72	57	43

* CU : CAPACITY UTILIZATION, P : PASSED, OF : DROP OUT/FAILED
 * MYMENSINGH HAS NOT COMMENCED PART TIME COURSE
 * DUE TO LACK OF SUPPLIED INFORMATION BY COMILLA AND FARIDPUR
 CAPACITY UTILIZATION PERCENTAGE CAN NOT BE SHOWN
 * 1992/1993 CU TOTAL RESULTS ARE INCONCLUSIVE DUE TO LACK OF INFORMATION

PART TIME COURSE

T T C	1989			1990			1991			1992			1993			1982 - 1993		
	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF
MIRPUR	41	81	19	87	-	-	87	43	57	84	79	21	80	74	26	72	60	40
MIRPUR B G T T C	89	71	29	61	79	21	65	48	52	62	84	16	97	81	19	70	75	25
CHITTAGONG	8	100	0	77	96	4	87	71	29	113	74	26	108	78	22	77	79	21
COMILLA	<---	---	--->	<---	---	---	<---	---	---	-	82	18	-	75	25	-	77	23
PARIDPUR	<---	---	--->	<---	---	---	<---	---	---	-	70	30	-	45	55	-	49	51
RAJSHAHI	<---	---	--->	50	40	60	100	50	50	80	97	3	<---	---	---	73	84	16
BOGRA	<---	---	--->	46	70	30	110	76	24	78	92	8	<---	---	---	81	58	42
BARISAL	<---	---	--->	60	63	37	82	68	32	90	80	20	84	-	-	77	53	47
TOTALS	73	73	27	78	59	41	81	58	42	95	80	20	116	66	34	82	70	30

TRADE COURSE	1982				1983				1984				1985				1986				1987			
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S
DRAFTSMAN CIVIL	<---	---	---	---	---	---	---	---	43	94	6	1/9	68	67	33	1/6	<---	---	---	---	---	---	---	---
DRAFTSMAN MECHANICAL	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
AIR CONDITIONING	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ELECTRICITY	<---	---	---	---	105	76	24	1/10	66	72	28	1/10	93	80	20	1/15	88	67	33	1/11	<---	---	---	---
RADIO ELECTRONICS	<---	---	---	---	60	28	72	1/9	27	75	25	1/8	83	68	32	1/10	83	52	48	1/10	<---	---	---	---
GENERAL MECHANICAL	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
AUTO MOTIVE	<---	---	---	---	58	78	22	1/12	38	80	20	1/5	88	74	26	1/14	40	50	50	1/11	<---	---	---	---
WOOD WORK	<---	---	---	---	67	87	13	1/10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
PLUMBING (SANITARY)	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MASONRY	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MACHINIST	<---	---	---	---	100	47	53	1/10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TURNER	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WELDING	<---	---	---	---	69	88	12	1/8	47	88	12	1/5	56	72	28	1/10	37	23	77	1/8	<---	---	---	---
TOTAL *	<---	---	---	---	33	66	34	-	48	79	21	-	79	72	28	-	61	53	47	-	<---	---	---	---

C/U : CAPACITY UTILIZATION, P : PASSED, DF : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO

* 1984: DUE TO STUDENT STRIKE ALL COURSE WERE CANCELLED

* 1990: DUE TO STUDENT STRIKE ALL FINAL EXAMS WERE DISRUPTED

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993		
	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	OP				
DRAFTSMAN CIVIL	15	67	33	1/3	13	100	0	1/5	30	-	-	1/6	<---	28	73	27	1/5	<---	83	17	1/11	<---	33	65	35		
DRAFTSMAN MECHANICAL	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
AIR CONDITIONING	56	48	52	1/8	42	79	21	1/9	133	-	-	1/15	---	---	---	---	---	---	---	---	---	---	---	---			
ELECTRICITY	80	50	50	1/11	38	73	27	1/7	108	-	-	1/10	103	51	49	1/10	95	83	17	1/14	58	39	61	1/8	84	62	38
RADIO ELECTRONIC	64	58	42	1/13	70	81	19	1/7	147	-	-	1/11	97	24	76	1/10	98	78	22	1/10	83	92	9	1/13	88	55	45
GENERAL MECHANICAL	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
AUTO MOTIVE	41	64	36	1/7	48	84	16	1/10	60	-	-	1/8	73	33	67	1/11	85	68	32	1/11	70	100	0	1/9	61	61	39
WOOD WORK	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
PLUMBING (SANITARY)	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
MASONRY	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
MACHINIST	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
TURNER	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
WELDING	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
TOTAL %	62	54	46	-	41	81	19	-	87	-	-	-	87	43	57	-	84	79	21	-	80	74	26	-	72	60	40

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUTS/FAILED, T/S : TRAINER/STUDENT RADIO

PART TIME COURSES

MIRPUR BG TTC

ANNEX NO. 5

(IN PERCENTAGE)

TRADE COURSE	1982				1983				1984				1985				1986				1987					
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S		
DRAFTSMAN CIVIL	<---																									
DRAFTSMAN MECHANICAL	<---																									
AIR CONDITIONING	<---																									
ELECTRICITY	60	93	7	1/9	87	69	31	1/10	67	87	13	1/10	69	67	33	1/10	75	70	30	1/12	63	49	51	1/10		
RADIO ELECTRONICS	<---																									
GENERAL MECHANICAL	<---				80	78	22	1/9	64	86	12	1/8	<---				16	57	43	1/1	<---					
AUTO MOTIVE	68	100	0	1/9	83	82	18	1/8	85	85	15	1/8	80	71	29	1/10	101	82	18	1/18	86	68	32	1/16		
WOOD WORK	<---																									
PLUMBING (SANITARY)	<---																									
MASONRY	<---																									
MACHINIST	<---				44	73	27	1/11	48	100	1	1/12	32	75	25	1/8	<---									
TURNER	<---				52	88	12	1/8	72	100	0	1/9	100	100	0	1/9	58	79	21	1/9	<---					
WELDING	<---				71	88	12	1/8	89	90	10	1/10	66	76	24	1/11	65	84	16	1/10	26	83	17	1/9		
ARMATURE WINDING	<---								56	71	29	1/7	80	40	60	1/10	82	56	44	1/10	68	68	32	1/11		
TOTAL %	64	96	4	-	74	79	21	-	68	86	14	-	67	71	29	-	70	75	25	-	60	65	35	-		

C/U : CAPACITY UTILIZATION, P : PASSED, DF : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO

TRADE COURSE	1988			1989			1990			1991			1992			1993			1982-1993												
	C/U	P	DF	T/S	C/U	P	DF	T/S	C/U	P	DF	T/S	C/U	P	DF	T/S	C/U	P	DF	C/U	P	DF									
DRAFTSMAN CIVIL	44	64	36	1/11	54	63	37	1/9	62	87	13	1/9	92	48	52	1/12	46	91	9	1/12	92	78	22	1/12	56	73	27	24	83	17	
DRAFTSMAN MECHANICAL	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	
AIR CONDITIONING	<---	<---	<---	<---	142	86	14	1/12	87	67	33	1/7	67	45	55	1/10	115	90	10	1/10	27	83	17	1/12	129	80	20				
ELECTRICITY	53	50	50	1/12	96	74	26	1/11	73	91	9	1/14	91	56	44	1/10	71	84	16	1/11	107	85	15	1/9	76	74	26	47	73	27	
RADIO ELECTRONIC	<---	<---	<---	<---	<---	<---	<---	<---	42	72	28	1/8	37	45	55	1/11	42	84	16	1/8	77	74	26	1/12	47	73	27				
GENERAL MECHANICAL	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---
AUTO MOTIVE	88	66	34	1/9	102	58	42	1/16	75	62	38	1/10	53	38	62	1/10	88	85	15	1/15	133	72	28	1/10	88	73	27				
WOOD WORK	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---
PLUMBING (SANITARY)	<---	<---	<---	<---	53	84	16	1/9	55	50	50	1/8	60	40	60	1/4	42	86	14	1/10	84	86	14	1/10	56	81	19				
MASONRY	<---	<---	<---	<---	64	100	0	1/8	24	100	0	1/6	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	44	100	0			
MACHINIST	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	39	85	15			
TURNER	<---	<---	<---	<---	<---	<---	<---	<---	43	81	19	1/8	64	50	50	1/8	<---	88	12	1/8	<---	90	10	1/10	58	84	16				
WELDING	43	73	27	1/7	57	60	40	1/12	46	75	25	1/11	51	56	44	1/9	47	85	15	1/11	66	96	4	1/12	55	78	22	82	63	37	
ARMATURE WIND.	88	68	32	1/11	108	70	30	1/11	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---
TOTAL %	63	64	36	-	89	71	29	-	61	79	21	-	65	48	52	-	75	84	16	-	97	81	19	-	70	75	25				

C/U : CAPACITY UTILIZATION, P : PASSED, DF : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO

PART TIME COURSES

CHITTAGONG TTC

ANNEX NO. 5

(IN PERCENTAGE)

TRADE COURSE	1982					1983					1984					1985					1986					1987				
	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S	CU	P	DP	T/S		
DRAFTSMAN CIVIL	64	69	31	1/8	88	59	41	1/11	80	75	25	1/10	108	93	7	1/9	56	79	21	1/7	<---	<---	<---	<---	<---	<---	<---	<---	<---	
DRAFTSMAN MECHANICAL	40	58	42	1/12	33	80	20	1/10	17	80	20	1/5	17	80	20	1/5	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	
AIR CONDITIONING	96	79	21	1/8	103	84	16	1/10	72	83	17	1/9	72	100	0	1/9	116	86	14	1/10	72	83	17	72	83	17	1/6	<---		
ELECTRICITY	83	72	28	1/6	87	81	19	1/13	70	100	0	1/10	70	100	0	1/7	73	82	18	1/11	63	89	11	63	89	11	1/10	<---		
RADIO ELECTRONICS	68	59	41	1/8	52	69	31	1/13	48	100	0	1/12	48	100	0	1/6	92	78	22	1/8	64	94	6	64	94	6	1/5	<---		
GENERAL MECHANICAL/ TURNER	65	69	31	1/10	45	61	39	1/12	31	88	12	1/12	31	76	24	1/8	<---	<---	<---	<---	57	82	18	57	82	18	1/8	<---		
AUTO MOTIVE	60	75	25	1/8	55	68	32	1/11	58	87	13	1/12	78	48	52	1/10	80	91	9	1/10	80	91	9	80	91	9	1/10	<---		
WOOD WORK	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	
PLUMBING (SANITARY)	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	
MASONRY	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	
MACHINIST	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	
TURNER	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	<---	
WELDING	92	70	30	1/12	92	83	17	1/12	88	91	9	1/11	88	82	18	1/7	71	83	17	1/9	52	85	15	52	85	15	1/6	<---		
TOTAL *	69	70	30	-	64	73	27	-	52	88	12	-	58	82	18	-	81	68	32	-	66	68	32	-	66	68	32	-	-	

C/U : CAPACITY UTILIZATION, P : PASSED, DP : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993		
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	CU	P	DF	
DEPARTMENT CIVIL	<---																										
DEPARTMENT MECHANICAL	<---																										
AIR CONDITIONING	56	100	0	1/4	<---			>	156	100	0	1/20	180	80	20	1/9	194	90	10	1/24	198	85	15	1/20	131	87	13
ELECTRICITY	50	100	0	1/8	<---			>	123	97	3	1/12	93	75	25	1/9	132	78	22	1/26	125	83	17	1/38	94	85	15
RADIO ELECTRONIC	72	89	11	1/6	8	100	0	1/1	48	100	0	1/6	116	41	59	1/10	118	61	39	1/30	102	73	27	1/17	75	72	28
GENERAL MECH. TURNER	43	100	0	1/6	<---			>	20	100	0	1/6	<---														
AUTO MOTIVE	75	80	20	1/10	<---																						
WOOD WORK	<---																										
PLUMBING (SANITARY)	<---																										
MASONRY	<---																										
MACHINIST	<---																										
TURNER	<---																										
WELDING	24	100	0	1/3	<---			>	40	100	0	1/10	40	70	30	1/10	60	87	13	1/15	64	84	16	1/16	64	84	16
TOTAL %	55	92	8	-	8	100	0	-	77	96	4	-	87	71	29	-	113	74	26	-	108	78	22	-	77	79	21

C/U : CAPACITY UTILIZATION, P : PASSED, DF : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO

PART TIME COURSE

COMILLA TTC

ANNEX NO. 5

(IN PERCENTAGE)

TRADE COURSE	1982			1983			1984			1985			1986			1987					
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	
DRAFTSMAN CIVIL	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
DRAFTSMAN MECHANICAL	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
AIR CONDITIONING	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ELECTRICITY	<---	---	---	---	88	12	---	---	63	17	---	---	---	---	---	---	---	---	---	---	---
RADIO ELECTRONICS	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GENERAL MECHANICAL	<---	---	---	---	87	13	---	---	71	29	---	---	---	---	---	---	---	---	---	---	---
AUTO MOTIVE	<---	---	---	---	---	---	---	---	75	25	---	---	---	---	---	---	---	---	---	---	---
WOOD WORK	<---	---	---	---	89	11	---	---	67	33	---	---	---	---	---	---	---	---	---	---	---
PLUMBING (SANITARY)	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MASONRY	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MACHINIST	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TURNER	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WELDING	<---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL %	<---	---	---	---	88	12	---	---	77	23	---	---	---	---	---	---	---	---	---	---	---

C/U : CAPACITY UTILIZATION, P : PASSED, DF : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO
 * DUE TO LACK OF INFORMATION CU CANNOT BE SHOWN

TRADE COURSE	1988			1989			1990			1991			1992			1993			1982-1993		
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	
DRAFTSMAN CIVIL	<---																				
DRAFTSMAN MECHANICAL	<---																				
AIR CONDITIONING	<---																				
ELECTRICITY	<---																				
RADIO ELECTRONIC	<---																				
GENERAL MECHANICAL	<---																				
AUTO MOTIVE	<---																				
WOOD WORK	<---																				
PLUMBING (SANITARY)	<---																				
MASONRY	<---																				
MACHINIST	<---																				
TURNER	<---																				
WELDING	<---																				
TOTAL %	<---																				

C/U : CAPACITY UTILIZATION, P : PASSED, DF : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO
 * DUE TO LACK OF INFORMATION CU CANNOT BE SHOWN

PART TIME COURSE

PARIDPUR TTC

ANNEX NO. 5

(IN PERCENTAGE)

TRADE COURSE	1982				1983				1984				1985				1986				1987	
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S		
DRAFTSMAN CIVIL	<---																					
DRAFTSMAN MECHANICAL	<---																					
AIR CONDITIONING	<---																					
ELECTRICITY	<---																					
RADIO ELECTRONICS	<---																					
GENERAL MECH./TURNER	<---																					
AUTO MOTIVE	<---																					
WOOD WORK	<---																					
PLUMBING (SANITARY)	<---																					
MASONRY	<---																					
MACHINIST	<---																					
TURNER	<---																					
WELDING	<---																					
ARMATURE WINDING	<---																					
TOTAL %	<---																					

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.
 * DUE TO LACK OF INFORMATION RECEIVED CU CANNOT BE SHOWN

TRADE COURSE	1988				1989				1990				1991				1992				1993				1992-1993			
	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	T/S	CU	P	D/P	
DRAFTSMAN CIVIL	<---																											
DRAFTSMAN MECHANICAL	<---																											
AIR CONDITIONING	<---																											
ELECTRICITY	-	33	67	1/6	<---																							
RADIO ELECTRONIC	<---																											
GENERAL MECHANICAL	-	40	60	1/10	<---																							
AUTO MOTIVE	<---																											
WOOD WORK	<---																											
PLUMBING (SANITARY)	<---																											
MASONRY	<---																											
MACHINIST	<---																											
TURNER	<---																											
WELDING	-	11	89	1/9	<---																							
ARMATURE WIND.	<---																											
TOTAL %	-	25	75	-	<---																							

C/U : CAPACITY UTILIZATION, P : PASSED, D/P : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

PART TIME COURSE

RAJSHAHI TTC

ANNEX NO. 5

(IN PERCENTAGE)

TRADE COURSE	1988			1989			1990			1991			1992			1993			1952-1993					
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF					
DRAFTSMAN CIVIL	<--->																							
DRAFTSMAN MECHANICAL	<--->																							
AIR CONDITIONING	<--->																							
ELECTRICITY	<--->								100	50	50	1/8	80	97	3	1/8	<--->			85	98	2		
RADIO ELECTRONIC	<--->																							
GENERAL MECHANICAL	<--->																							
AUTO MOTIVE	<--->									50	40	60	1/4	<--->						50	40	60		
WOOD WORK	<--->																							
PLUMBING (SANITARY)	<--->																							
MASONRY	<--->																							
MACHINIST	<--->																							
TURNER	<--->																							
WELDING	<--->																							
TOTAL %	<--->									50	40	60	100	50	50	80	97	3	<--->			73	84	16

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUT/FAILED, T/S : TRAINER STUDENT RATIO.
 * PART TIME COURSES COMMENCED IN 1990

TRADE COURSE	1988			1989			1990			1991			1992			1993			1982-1993					
	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF	CU	P	DF			
DRAFTSMAN CIVIL	<---																							
DRAFTSMAN MECHANICAL	<---																							
AIR CONDITIONING	<---																							
ELECTRICITY	<---						64	75	25	1/5	132	91	9	1/16	88	100	0	1/11	<---			93	69	31
RADIO ELECTRONIC	<---																							
GENERAL MECHANICAL	<---																							
AUTO MOTIVE	<---						28	57	43	1/3	88	55	45	1/11	68	92	18	1/9	<---			69	43	57
WOOD WORK	<---																							
PLUMBING (SANITARY)	<---																							
MASONRY	<---																							
MACHINIST	<---																							
TURNER	<---																							
WELDING	<---																							
TOTAL %	<---						46	70	30	-	110	76	24	-	78	92	8	-	<---			81	58	42

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.
 * PART TIME COURSE COMMENCED IN 1990

PART TIME COURSES

ANNEX NO. 5

BARISAL TTC

(IN PERCENTAGE)

TRADE COURSE	1982				1983				1984				1985				1986				1987			
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S
DRAFTSMAN CIVIL	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
DRAFTSMAN MECHANICAL	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
AIR CONDITIONING	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
ELECTRICITY	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
RADIO ELECTRONICS	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
GENERAL MECHANICAL	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
AUTO MOTIVE	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
WOOD WORK	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
PLUMBING (SANITARY)	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
MASONRY	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
MACHINIST	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
TURNER	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
WELDING	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---
TOTAL %	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---	<---	---	---	---

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

TRADE COURSE	1988				1989				1990				1991				1992				1993				1982-1993			
	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	T/S	CU	P	DF	CU	P	DF		
DRAFTSMAN CIVIL	<---																											
DRAFTSMAN MECHANICAL	<---																											
AIR CONDITIONING	<---																											
ELECTRICITY	36	100	0	1/9	<---				65	71	29	1/9	92	74	26	1/11	100	75	22	1/16	94				88	55	45	
RADIO ELECTRONIC	<---																											
GENERAL MECHANICAL	<---																32	50	50	1/8	52					42	19	81
AUTO MOTIVE	40	90	10	1/10	<---				52	54	66	1/7	72	61	39	1/9	108	57	13	1/16	90				50	53	47	
WOOD WORK	65	92	5	1/13	<---																				50	70	30	
PLUMBING (SANITARY)	<---																											
MASONRY	<---																											
MACHINIST	<---																											
TURNER	<---																											
WELDING	<---																											
TOTAL %	46	94	6	-	<---				60	63	37	-	82	68	32	-	90	50	20	-	54				77	53	47	

C/U : CAPACITY UTILIZATION, P : PASSED, D/F : DROP OUT/FAILED, T/S : TRAINER/STUDENT RATIO.

ANNEXURE NO. 6 : NAME OF JOCVs, PLACE OF ASSIGNMENT, TRADE AND DURATION SINCE 1982

NAME	TRADE	PLACE OF ASSIGNMENT	DATE OF ARRIVAL	DATE OF EXPIRY
Shigeru Takahashi	Auto Diesel	T.T.C., Mirpur, Dhaka	27th Jan., 1982	27th Jan., 1984
Shouji Uematsushi	Electronic Instruments	T.T.C., Mirpur, Dhaka	22nd Jan., 1984	22nd Jan., 1986
Fusao Sato	Automobile	T.T.C., Mirpur, Dhaka	22nd Jan., 1984	22nd Jan., 1986
Yasuhiko Sawada	Electronic Instruments	T.T.C., Mirpur, Dhaka	20th Dec., 1986	19th Dec., 1988
Tetsuya Iwasa	Mechanical Drafting /Maintenance	T.T.C., Mirpur Dhaka	20th Dec., 1986	19th Dec., 1988
Kaoru Abe	Electronic Instruments	T.T.C., Mirpur, Dhaka	01st Apr., 1989	31st Jul., 1991
Shigehiro Noguchi	Mechanical Drafting	T.T.C., Mirpur, Dhaka	01st Apr., 1989	31st Jul., 1991
Kazuo Masuike	General Mechanics	T.T.C., Mirpur, Dhaka	20th July, 1991	20th July, 1993
Naka Nakatsubo	Machine Drafting	T.T.C., Mirpur, Dhaka	05th Apr., 1992	05th Apr., 1994
Kenji Imamura	Automobile Maintenance	T.T.C., Mymensingh	31st Mar., 1985	20th Dec., 1987
Keiji Hori	Machine Tools	T.T.C., Mymensingh	20th Dec., 1985	20th Dec., 1987
Terumi Yoshida	General Mechanics	T.T.C., Mymensingh	29th Mar., 1990	28th Mar., 1992
Yoshinori Yasumoto	Automobile Maintenance	T.T.C., Mymensingh B.G.T.T.C., Mirpur,	06th Jan., 1989 06th Jan., 1990	30th Jan., 1990 04th Jan., 1991
Yukio Matsubara	General Mechanics	T.T.C., Mymensingh	05th Apr., 1992	05th Apr., 1994
Mitsuhiro Ando	Mechanical Drafting	T.T.C., Chittagong	27th Jan., 1982	27th Jan., 1984
Yoichi Adachi	Automobile Maintenance	T.T.C., Chittagong	08th Apr., 1982	08th Apr., 1984

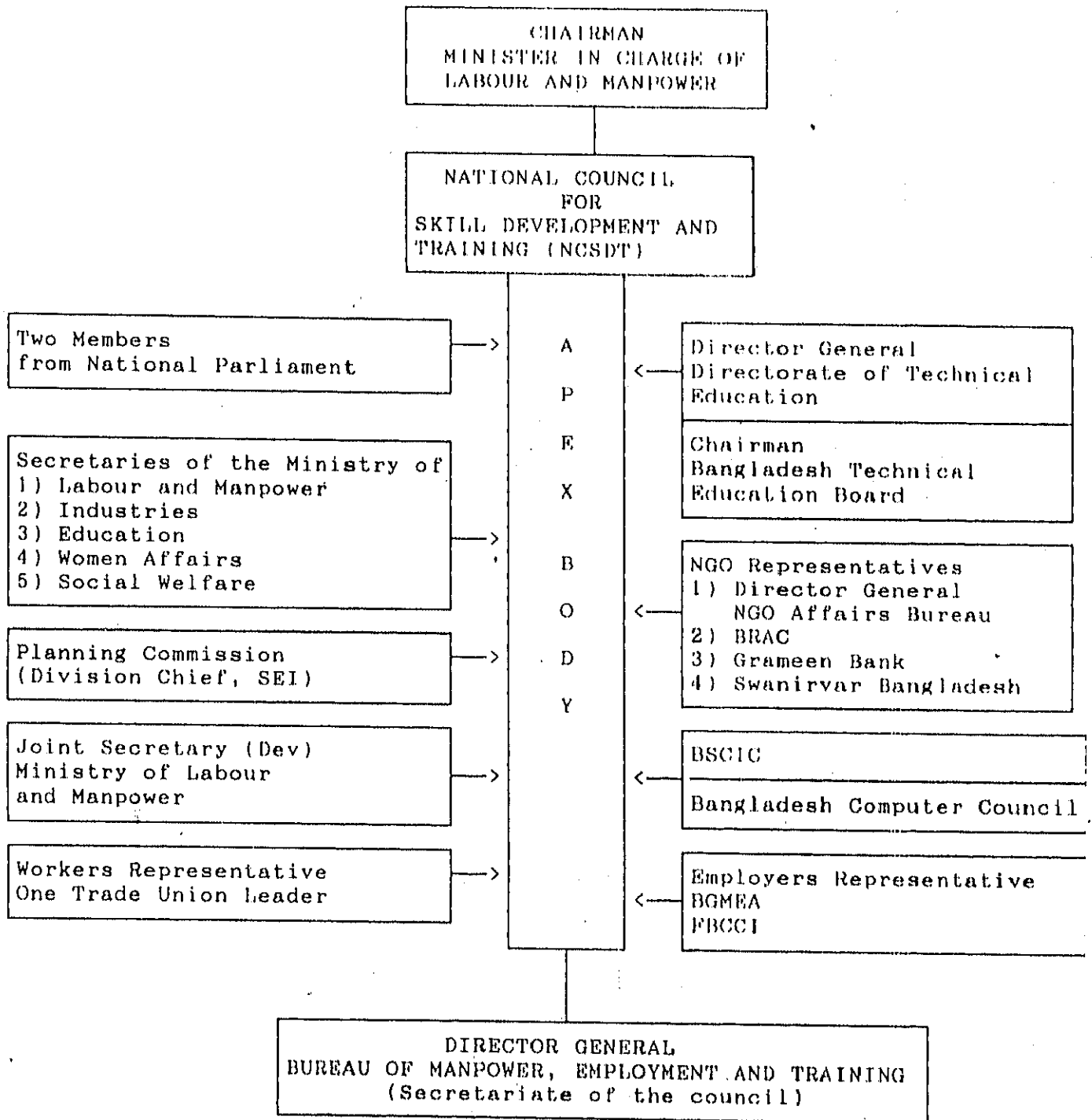
NAME	TRADE	PLACE OF ASSIGNMENT	DATE OF ARRIVAL	DATE OF EXPIRY
Hisao Odagira	Welding	T.T.C., Chittagong	04th Oct., 1982	04th Oct., 1985
Shingo Isshiki	Machine Drawing	T.T.C., Chittagong	22nd Jan., 1984	22nd Jan., 1986
Kenichi Morita	Automobile Maintenance	T.T.C., Chittagong	27th Jan., 1982	27th Jan., 1984
Akiro Kobayashi	Welding	T.T.C., Chittagong	01st Dec., 1984	01st Dec., 1986
Tatsuhito Itsuka	Machine Tools	T.T.C., Chittagong	30st Mar., 1986	30th Mar., 1988
Izuru Suzuki	Machine Drawing	T.T.C., Chittagong B.G.T.T.C, Mirpur	01st Aug., 1986 01st Sep., 1987	01st Aug., 1987 29th Mar., 1989
Toshio Koide	Electric Works	T.T.C., Chittagong T.T.C., Mymensingh	20th Jul., 1991 20th Jan., 1992	20th Jan., 1992 20th Jul., 1993
Tsuyoshi Arakichi	Refrigeration	T.T.C., Chittagong	14th Dec., 1991	13rd Dec., 1993
Eiji Ando	Machine Tools	T.T.C., Chittagong	14th Dec., 1991	13th Dec., 1993
Takashi Kurumizawa	Mechanical Drafting	T.T.C., Chittagong	14th Dec., 1992	11th Jul., 1994
Eiji Sato	Automobile Maintenance	T.T.C., Rangamati	11th Jul., 1983	31st Jul., 1985
Kazuhisa Inoue	Welding	T.T.C., Rangamati	09th Oct., 1983	09th Oct., 1985
Akira Nishikawa	Welding	T.T.C., Rangamati	25th Jul., 1985	25th Jul., 1987
Teruhiro Yuda	Automobile Maintenance	T.T.C., Rangamati	20th Dec., 1985	20th Dec., 1987
Hiromoto Goto	Dress Making	T.T.C., Rangamati B.G.T.T.C., Mirpur, Dhaka	30th Mar., 1987 01st Sep., 1987	30th Aug., 1987 29th Mar., 1989
Keiji Sakuma	Automobile Maintenance	T.T.C., Comilla	23rd Jan., 1983	23rd Jan., 1985

NAME	TRADE	PLACE OF ASSIGNMENT	DATE OF ARRIVAL	DATE OF EXPIRY
Ayato Kikuchi	Automobile Maintenance	T.T.C., Comilla	31st Mar., 1985	29th Sep., 1987
Michio Yamauchi	Electronic Instruments	T.T.C., Comilla	25th Jul., 1985	25th Jul., 1987
Itsuji Shimoune	Electric Works	T.T.C., Comilla	20th Dec., 1987	18th Dec., 1989
Kunitoshi Sakata	Automobile Maintenance	T.T.C., Comilla	06th Jan., 1989	04th Jan., 1992
Yasumitsu Sakaguchi	Electric Works	T.T.C., Comilla	29th Nov., 1989	28th Nov., 1991
Hisashi Kusumoto	Automobile Maintenance	T.T.C., Rajshahi	04th Oct., 1982	04th Oct., 1985
Yoshihiro Sassa	Architectural Drawing	T.T.C., Rajshahi	23rd Jan., 1983	23rd Jan., 1985
Kenro Nishida	Electric Works	T.T.C., Rajshahi	23rd Jan., 1983	23rd Jan., 1985
Jun Ohta	Architectural Drawing	T.T.C., Rajshahi	20th Dec., 1987	18th Dec., 1989
Kazuhiro Miyazawa	Welding	T.T.C., Rajshahi	28th Jan., 1988	26th Feb., 1991
Seichi Kusakabe	Welding	T.T.C., Rajshahi	10th Dec., 1992	10th Dec., 1994
Kouichi Tabata	Welding	T.T.C., Khulna	31st Mar., 1985	31st Mar., 1988
Yoshiaki Hashimoto	Automobile Maintenance	T.T.C., Khulna	31st Mar., 1985	31st Mar., 1987
Hitoshi Ikeda	Architectural Drawing	T.T.C., Khulna	31st Mar., 1985	31st Mar., 1987
Yuji Ikeda	Electronic Works	T.T.C., Khulna	30th Mar., 1987	29th Mar., 1989
Yoshifumi Nakamura	Machine Tools	T.T.C., Khulna	06th Jan., 1989	09th Jan., 1993
Hiroyuki Tanaka	Mechanical Drafting	T.T.C., Khulna	06th Jan., 1989	04th Jan., 1992

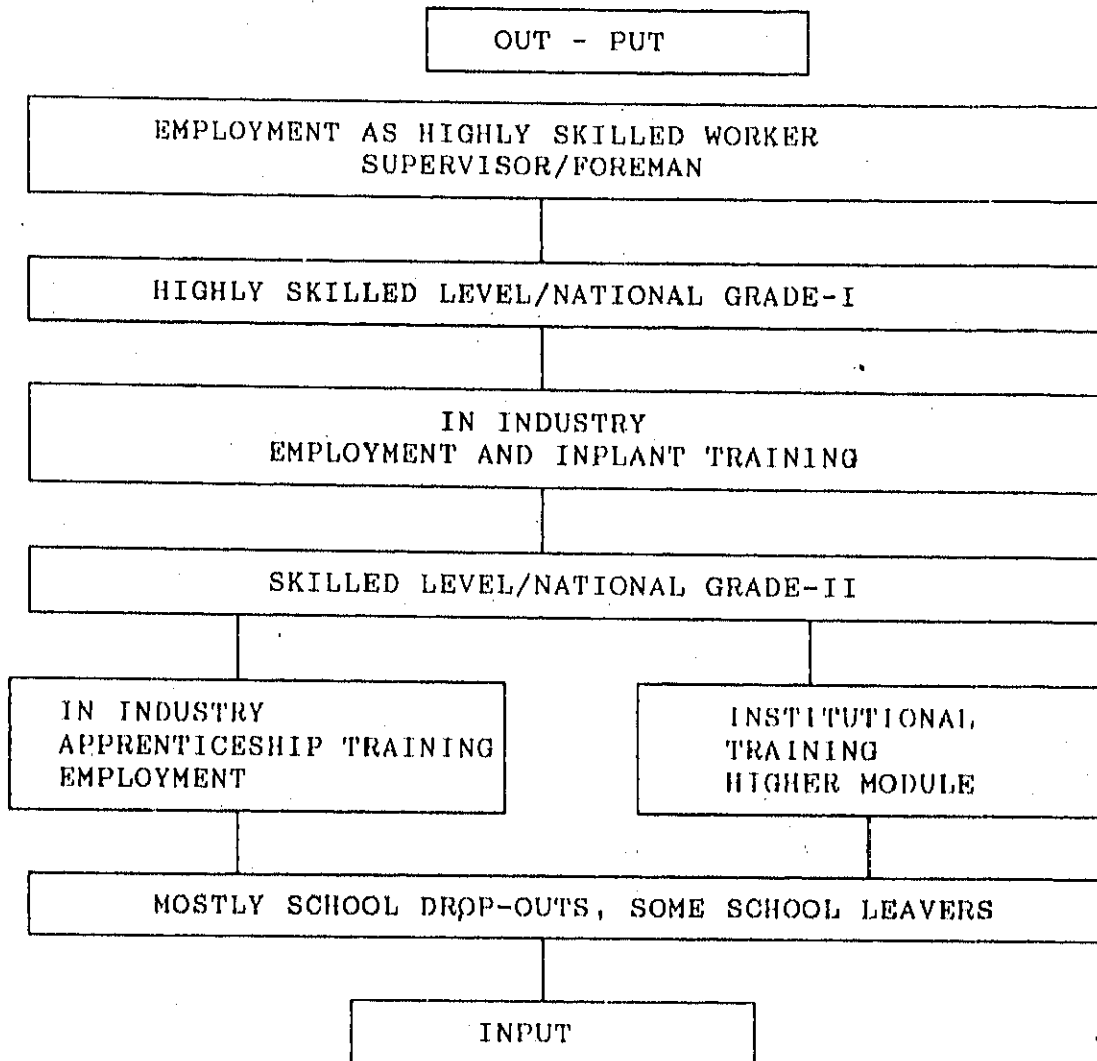
NAME	TRADE	PLACE OF ASSIGNMENT	DATE OF ARRIVAL	DATE OF EXPIRY
Nobuyuki Nakamura	Electronic Instruments	T.T.C., Khulna	29th Mar., 1990	28th Mar., 1992
Seichiro Kurosawa	Automobile Maintenance	T.T.C., Khulna	06th Apr., 1991	05th Jul., 1993
Tsunao Kurato	Civil Drafting	T.T.C., Khulna	05th Apr., 1992	05th Apr., 1994
Yoshiyuki Ishikawa	Machine Tools	T.T.C., Khulna	10th Dec., 1992	10th Dec., 1994
Yoshitsugu Takahashi	Electric Works	T.T.C., Faridpur	25th Jul., 1985	25th Jul., 1987
Eiji Genda	Mechanical Drafting	T.T.C., Faridpur	20th Dec., 1983	20th Dec., 1987
Koichi Suzuki	Civil Drafting	T.T.C., Faridpur	09th Aug., 1987	07th Aug., 1989
Takanori Ehara	Electric Works	T.T.C., Faridpur	20th Dec., 1985	18th Dec., 1989
Hironobu Esaki	Welding	T.T.C., Faridpur	29th Nov., 1989	28th Dec., 1989
Shunjun Takahashi	Civil Drafting	T.T.C., Faridpur	29th Mar., 1990	28th Dec., 1990
		T.T.C., Chittagong	01st Jan., 1991	29th Mar., 1992
Hiroshi Hamano	Electric Works	T.T.C., Faridpur	14th Dec., 1991	13rd Dec., 1993
Tamotsu Sakuma	Welding	T.T.C., Faridpur	10th Dec., 1992	10th Dec., 1994
Sumitomo Inomata	Electric Works	T.T.C., Barisal	20th Dec., 1992	20th Dec., 1994
Kenichi Yoshida	Automobile Maintenance	T.T.C., Barisal	30th Mar., 1985	29th Mar., 1989
Akio Kobayashi	Automobile Maintenance	T.T.C., Barisal	30th Mar., 1987	29th Mar., 1989
Yoshitsugu Shimizu	Automobile Maintenance	T.T.C., Barisal	29th Mar., 1990	28th Feb., 1991
		T.T.C., Bogra	28th Feb., 1991	28th Mar., 1993

NAME	TRADE	PLACE OF ASSIGNMENT	DATE OF ARRIVAL	DATE OF EXPIRY
Tsuyoshi Murakami	Machine Tools	T.T.C., Bogra	20th Dec., 1986	19th Dec., 1989
Kenichi Sone	Electric Works	T.T.C., Bogra	30th Mar., 1987	29th Mar., 1989
Takashi Suzuki	Plumbing & Pipe Fitting	T.T.C., Bogra	07th Apr., 1993	05th Apr., 1995
Kiyomasa Kinjo	Plumbing & Pipe Fitting	B.G.T.T.C., Mirpur, Dhaka	09th Aug., 1987	07th Aug., 1989
Yoichiro Minato	Welding	B.G.T.T.C., Mirpur, Dhaka	06th Jan., 1989	07th Aug., 1989
Yoshiko Kiyokawa	Dress Making	B.G.T.T.C., Mirpur, Dhaka	01st Apr., 1989	31st Mar., 1992
Akiro Momoyama	Plumbing & Pipe Fitting	B.G.T.T.C., Mirpur, Dhaka	01st Apr., 1989	16th Jul., 1992
Tomoko Yamaguchi	Dress Making	B.G.T.T.C., Mirpur, Dhaka	14th Dec., 1991	13rd Dec., 1993
Yoshio Yusa	Welding	B.I.M.T., Narayanganj	25th Jul., 1985	25th Jul., 1987

ORGANIZATIONAL SET-UP OF NATIONAL COUNCIL
FOR SKILL DEVELOPMENT AND TRAINING



NCSDT SCHEME FOR SKILL DEVELOPMENT



ANNEXURE-9 : TRAINING MANUALS PREPARED BY JOCVs

1. Development of Vocation Training in Electric
by Mr. Kenro Nishida, TTC Rajshahi
2. ARC Welding by Mr. Hisao Odagira, TTC Chittagong
3. Basic Drawing by Mr. Yashihiro Sassa, TTC Rajshahi
4. Practice on Plumbing and Pipe Fitting (Part I)
by Mr. Kiyomasa Kinjo, BGTTC., Mirpur
5. Plumbing and Pipe Fitting (Part II)
by Mr. Kiyomasa Kinjo, BGTTC., Mirpur
6. TIG MIG MAG, Welding Training by Instructors of TTC's
by Mr. Kazuhiro Miyazawa, TTC., Rajshahi
Mr. Yoichiro Minato, TTC., Mirpur
Mr. Hironobu Esaki, TTC., Faridpur
7. Practice on TIG (Tungsten inert. gas) Welding
by Mr. Yoichiro Minato
8. Automobile Engineering (in Bengali)
by Mr. Keiji Sakuma, TTC., Comilla
9. Hiroshima No Pika, Hiroshima Atom Bomb (in Bengali)
by Mr. Tsuyoshi Murakami, TTC., Bogra
10. Testing Manual (in Bengali)
by Mr. Ayato Kikuchi, TTC., Comilla
11. ARC Welding Practical (in Bengali)
by Mr. Hisao Odigari, TTC., Rajshahi
12. Automotive Trouble Shooting
by Mr. Seiichiro Kurosawa, TTC., Khulna

ANNEXURE NO. 10 : STATEMENT SHOWING THE INVOLVEMENT OF JOCVs IN ORGANIZING INSTRUCTORS
TRAINING PROGRAMME (1991-1994)

SESSION	NAME OF TRADE/ DURATION	VENUE	TTC INSTRUCTORS NUMBER	TTC INSTRUCTORS ATTENDED/	NAME OF JOCV/TTC	
1991-92	WELDING 1-2-92 TO 27-2-92	FARIDPUR TTC	MIRPUR	- 1	1. ESAKI HIRONOBU	- FARIDPUR TTC
			KHULNA	- 1		
			RAJSHAHI	- 2		
			MYMENSINGH	- 1		
		BARISAL	- 1			
	MACHINE SHOP 1-2-92 TO 27-2-92	MIRPUR B/G TTC	MIRPUR	- 1	1. NAKAMURA YOSHIFUMI	- KHULNA TTC
			MIRPUR B/G	- 2	2. YOSHIDA TERUMI	- MYMENSINGH TTC
			CHITTAGONG	- 2	3. ANDO EIJI	- CHITTAGONG TTC
			RAJSHAHI	- 1	4. MASUIKE KAZUO	- MIRPUR TTC
		KHULNA	- 1			
		MYMENSINGH	- 1			
		RANGAMATI	- 1			
	COMILLA	- 1				
	FARIDPUR	- 1				
	NARAYANGANJ BIMT	- 1				
MECHANICAL DRAFTING 1-2-92 TO 27-2-92	CHITTAGONG TTC	CHITTAGONG	- 1	1. TANAKA HIROYUKI	- KHULNA TTC	
		MIRPUR B/G	- 2	2. TAKAHASHI SHUNJUN	- CHITTAGONG TTC	
		BIMT	- 2			
	COMILLA	- 2				
	KHULNA	- 2				
	MIRPUR	- 1				
RADIO/TV 25-1-92 TO 30-1-92	KHULNA TTC	MIRPUR	- 2	1. NAKAMURA NOBUYUKI	- KHULNA TTC	
		COMILLA	- 2			
AUTOMOTIVE 3-2-92 TO 27-2-92	KHULNA TTC	KHULNA	- 2	1. SHIMIZU YOSHITSUGO	- BOGRA TTC	
		MIRPUR	- 1	2. KUROSAWA SEIICHIRO	- KHULNA TTC	
		CHITTAGONG	- 2			
		BARISAL	- 1			
	BOGRA	- 1				
	MYMENSINGH	- 1				

SESSION	NAME OF TRADE/ DURATION	VENUE	TTC INSTRUCTORS NUMBER	ATTENDED/ NUMBER	NAME OF JOCV/TTC
1992-93	MACHINE SHOP 5-2-93 TO 5-3-93	MIRPUR B/G TTC	MIRPUR	3	1. MASUIKE KAZUO
			MIRPUR B/G	2	2. ANDO EIJI
			RANGAMATI	1	3. MATSUBARA YUKIO
	MECHANICAL DRAFTING 5-2-93 TO 26-2-93	KHULNA TTC	RAJSHAHI	1	1. KAKATSUBO NAKA
			CHITTAGONG	3	2. KURATA TSUNEO
			KHULNA	3	3. KURUMIZAWA TAKASHI
	REFRIGERATION & AIR-CONDITIONING 5-2-93 TO 19-2-93	CHITTAGONG TTC	MIRPUR	4	1. ARAKICHI TSUYOSHI
			MIRPUR B/G	4	
			CHITTAGONG	5	
	AUTOMOTIVE 5-2-93 TO 5-3-93	KHULNA TTC	COMILLA	2	1. SHIMIZU YOSHITSUGU
			MIRPUR	2	2. KUROSAWA SEIICHIRO
			FARIDPUR	2	3. MASUYAMA MITSUJIRO
			RAJSHAHI	1	
			KHULNA	2	
			BARISAL	1	
DRESS MAKING 5-2-93 TO 19-2-93	CHITTAGONG TTC	RANGAMATI	1	1. YAMAGUCHI TOMOKO	

SESSION	NAME OF TRADE/ DURATION	VENUE	TTC INSTRUCTORS NUMBER	TTC INSTRUCTORS ATTENDED/	NAME OF JOCV/TTC	
1993-94	ELECTRICAL SHOP 5-2-93 TO 19-2-93	MYMENSINGH TTC	KHULNA RAJSHAHI BARISAL FARIDPUR MIRPUR BOGRA CHITTAGONG MYMENSINGH RANGAMATI COMILLA	-	1. TOSHIO KOIDE	- MYMENSINGH TTC
				-	2. HIROSHI HAMANO	- FARIDPUR TTC
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
1993-94	MACHINE SHOP 17-1-94 TO 28-2-94	MIRPUR TTC	MIRPUR RAJSHAHI KHULNA COMILLA BARISAL RANGAMATI MYMENSINGH BOGRA FARIDPUR MIRPUR B/G	-	1. MATSUBARA YUKIO	- MYMENSINGH TTC
				-	2. ISHIKAWA YOSHITUKI	- KHULNA TTC
				-	3. ANDO EIJI	- CHITTAGONG TTC
				-	4. NAKATSUBO NAKA	- MIRPUR TTC
				-	5. KURATA TSUNEO	- KHULNA TTC
				-	6. KURUMIZAWA TAKASHI	- RAJSHAHI TTC
				-		
				-		
				-		
				-		
				-		
				-		
1993-94	MACHINE SHOP 17-1-94 TO 28-2-94	KHULNA TTC	KHULNA BOGRA RAJSHAHI CHITTAGONG MIRPUR MIRPUR B/G	-	1. ANDO EIJI	- CHITTAGONG TTC
				-	2. MATSUBARA YUKIO	- MYMENSINGH TTC
				-	3. ISHIKAWA YOSHIZUKI	- KHULNA TTC
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		

SESSION	NAME OF TRADE/ DURATION	VENUE	TTC INSTRUCTORS NUMBER	TTC INSTRUCTORS ATTENDED/	NAME OF JOCV/TTC		
1993-94	MECHANICAL DRAFTING 22-1-94 TO 24-2-94	RAJSHAHI TTC	RAJSHAHI	- 1	1. NAKATSUBO NAKA	- MIRPUR TTC	
			CHITTAGONG	- 3	2. KURATO TSUNEO	- KHULNA TTC	
			KHULNA	- 2	3. KURUMIZAWA YOSHIZUKI	- KHULNA TTC	
				MIRPUR	- 3		
				BIMT	- 2		
	AUTOMOTIVE 22-1-94 TO 24-2-94	RAJSHAHI TTC	RAJSHAHI	- 1	1. MASHUMAYA TAMUTSU	- RAJSHAHI TTC	
			BOGRA	- 1			
			CHITTAGONG	- 2			
				RANGAMATI	- 1		
				MIRPUR	- 2		
	ELECTRICAL SHOP 17-1-94 TO 13-2-94	CHITTAGONG TTC	MIRPUR	- 1	1. HAMANO HIROSHI	- MIRPUR TTC	
			CHITTAGONG	- 1			
RAJSHAHI			- 1				
RANGAMATI			- 1				
MYMENSINGH			- 1				
BOGRA			- 1				
			BARISAL	- 1			
WELDING SHOP 15-1-94 TO 18-1-94 AND 15-1-94 TO 3-3-94	FARIDPUR TTC	MIRPUR	- 2	1. SAKUMA TAMATSU	- FARIDPUR TTC		
		MIRPUR B/G	- 1				
		CHITTAGONG	- 2				
		RAJSHAHI	- 3				
		KHULNA	- 3				
			FARIDPUR	- 2			
PLUMBING AND PIPE FITTING 17-1-94 TO 10-2-94	MIRPUR B/G TTC	MIRPUR B/G	- 6	1. TAKASHI SUZUKI	- BOGRA TTC		
		COMILLA	- 2				
		BOGRA	- 2				

SOURCE: DIFFERENT YEARS REPORTS ON INSTRUCTORS TRAINING PROGRAMME,
JOCV LOCAL OFFICE, DHAKA

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