EX-POST EVALUATION STUDY ON JAPAN-MALAYSIA TECHNICAL INSTITUTE PROJECT IN MALAYSIA

Evaluation Report

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Summary Sheet

Ex-Post Evaluation Conducted by JICA Malaysia Office

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JAPAN-MALAYSIA TECHNICAL INSTITUTE PROJECT IN MALAYSIA</td></tr>
<tr><td colspan="2">Field:
Manufacturing/Mechatronics/Computer and Electronics</td><td colspan="2">Cooperation scheme: Project-type Technical Cooperation</td></tr>
<tr><td colspan="4">Section in charge: Manpower Department, Ministry of Human Resources, Malaysia, Japan International Cooperation Agency (JICA)</td></tr>
<tr><td rowspan="2">Period of Cooperation</td><td rowspan="2">i) 15 January 1998 – 14 January 2003
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Japan Malaysia Technical Institute (JMTI)</td></tr>
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<tr><td colspan="4">1-1 Background of the Project
Since the late 1980s, the Malaysian economy experienced rapid and continued growth owing to the successful government efforts for attracting foreign investment. Faced with intensifying shortages of manpower and increasing dependency on foreign labour, in the early 1990s, the government changed its policy focus on the development of high-tech industries. In the 7th Malaysia Plan, 1996-2000, more emphasis was placed on restructuring the country's manufacturing sector by encouraging foreign investment in high-tech areas and upgrading of the skill levels of its workforce.
A Human Resources Development Plan was formulated to meet the manpower demand and requirements of this sector and this entails training more workers for high-tech jobs. In line with this policy, the Manpower Department under the Ministry of Human Resources too positive steps to achieve the targets of the Plan by establishing new Advanced Technology Training Centres (ADTEC), among which is the Japan-Malaysia Technical Institute (JMTI).
In 1993, the Malaysian Government's proposal to establish JMTI was conveyed to the Japanese Government. In August the following year, the then Japanese Prime Minister, Mr Muruyama, during his tour of Malaysia and the ASEAN countries, promised his Malaysian counterpart that the Japanese Government would cooperate to realise the proposal. Subsequently in 1997, a Technical Cooperation Accord for the establishment of JMTI was concluded and signed by representatives of both governments. This technical cooperation based on the Accord started in January 1998 as a government-government Project extending over the next five years.
However towards the end of the initial five-year period, some activities in certain important technical fields have not been completed due to late delivery of equipment. The Project was then extended by a year and was terminated only on 14th January 2004.
This ex-post evaluation is conducted three years after the completion of the follow-up Project to gain an understanding of the impact and sustainability of the Project.</td></tr>
<tr><td colspan="4">1-2 Project Overview
The JMTI project is featured by the provision of wide range of services making use of professional expertise of several Japanese technical experts in the relevant fields, Malaysian Instructors trained in Japan and several high-tech training equipment donated by the Japanese Government. The services cover diploma courses for high-school leavers, short-term technical and supervisory courses for company employees as well as technical consultancy for SMI managers.
JMTI is sited on a plot of land at Bukit Minyak Industrial Park in the State of Penang, a center of the electronics industry in the country, and the land (with an area of 6.5 hectare) was donated by the State Government in 1997 through Penang Development Corporation (PDC).
The primary objective of JMTI is to produce highly skilled technologists in the fields of advanced technology in manufacturing, electronics, computer and mechatronics. In addition, JMTI aims to assists in the development of local industries, particularly SMIs, through provision of supervisory and continuous skill training for their employees and individual technical consultancy services for their entrepreneurs and managers.
To verify the important issues relating to the project impact and sustainability observed three (3) years after the completion of the Project.</td></tr>
<tr><td colspan="2">(1) Overall Goal</td><td colspan="2">To satisfy the industrial needs for industrial technologists in the field of high technology.</td></tr>
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<tr><td>(2) Project Purpose</td><td colspan="3">To produce highly skilled industrial technologist (L4 equivalent) in the field of high technology in manufacturing, electronics, computer and mechatronics in the Japan-Malaysia Technical Institute (JMTI) (15th January 1998-14th January 2003)
To enhance the training ability of the instructors to meet the changing industrial needs in the fields of high technology in manufacturing, electronics and mehatronics in the Japan-Malaysia Technical Institute (JMTI) (Follow up Period)</td></tr>
<tr><td>(3) Outputs</td><td colspan="3">1) Systematic vocational training is planned at JMTI.
2) Measures to enrol qualified trainees established.
3) Necessary numbers of qualified instructors in the above fields are trained for JMTI.
4) Necessary training course in the above fields are identified, prepared and conducted,
5) Adequate facilities, machinery and equipment for training are prepared and made operational.
6) JMTI is well managed in terms of organization, personnel and finance.</td></tr>
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<tr><td>Long-term Expert</td><td colspan="2">16</td></tr>
<tr><td>Short-term Expert</td><td colspan="2">27</td></tr>
<tr><td>Equipment</td><td colspan="2">565 million yen</td></tr>
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<tr><td>Counterparts trained</td><td colspan="2">92 persons</td></tr>
<tr><td>Cost of Construction</td><td colspan="2">Ringgit Malaysia (RM) 53,230,000 (all by Malaysian Side)
RM38,812,000 (Main Building)</td></tr>
<tr><td>Equipment</td><td colspan="2">RM 53,056,000</td></tr>
<tr><td colspan="4">2. Evaluation Team: PE Research Sdn Bhd (commissioned by JICA Malaysia Office)</td></tr>
<tr><td>Members of Evaluation Team</td><td colspan="3">Yoshinobu IKURA (JICA Malaysia Office)
Lim Pao Li (consultant)
Lim Ai Lee (researcher)</td></tr>
<tr><td>Period of evaluation</td><td>March 1– March 30, 2007</td><td colspan="2">Type of Evaluation: Ex-Post Evaluation</td></tr>
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(1) Impact</td></tr>
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a. Achievement of the Overall Goal:

JMTI has continued to produce graduates at the L4 level for all four fields of study. JMTI has started course for L5 level. From the July 1998 intake of 58 students, 15 have graduated from the Electronics Engineering Technology Department (EETD) and 23 from Computer Engineering Technology Department (CETD). From the July 2003 intake of 223 students, 35 graduated from EETD, 42 graduated from CETD, 44 graduated from Mechatronics Engineering Technology Department (METD) and 35 graduated from Manufacturing Engineering Technology Department (MfETD). The total number of graduates has increased by four-fold from 38 graduates to 156 graduates.

The majority of the graduates have managed to find jobs with industry, while some proceeded for further studies. Feedback from the employers interviewed rated JMTI's training programme as comparable or better compared to the other training institutions. So it is concluded that the Project Purpose has been kept and achieved.

b. Unintended Effects:

Positive Impact

Many of the counterpart staff have been upgraded in their posts while some have been promoted to head other Industrial Training Institutes (ITIs) throughout the country. This has not only benefited the individual career development but has enabled the Ministry of Human Resources (MoHR) to staff the new Vocational Training Institutions (VTIs) (both ITIs and Advanced Technology Training Centres (ADTECs)) that have been set up.

JMTI has been able to offer services to private sector: Renting out computer labs and measuring equipments; providing consultancy services through the engineering consultancy services department; and short-term training course to approximately 300 participants each year. Services rendered to the private sector, especially the customised short-term training courses have earned income for the JMTI Trust fund.

Feedback received from firms surveyed indicated that all the employers were satisfied with the training at JMTI and that they would hire more graduates from JMTI as well as will recommend JMTI training / graduates to other employers. In addition, the employers suggested JMTI that the industrial training (on-the-job training) be extended to at least four months, to give the trainees more time to gain working experience and exposure.

Negative Impact

Transfers and promotions of the ex-counterparts meant that JMTI has lost many of the experienced instructors.

(2) Sustainability

a. Institutional and Management Aspect:

Demand for JMTI courses has been high and more than a thousand applications are received each year. The skills learned during the Project have been widely shared with other new staff as well as with other MoHR institutes. The sustainability of the Project is shown in the ability of counterpart staff to develop (i) programme curricula for Levels 4 and 5; (ii) in-house training programmes; (iii) syllabi and written instruction material for teaching; and (iv) internship programmes.

b. Technological Aspect:

Overall 68% of Project staff received training to upgrade and expand their skills and knowledge which they have acquired through the Project since Project completion. Eleven project staff have received training in other countries (Japan, Germany and UK); seven were trained in Malaysia while ten received in-house training.

Most of the equipments in the METD (100%), MfETD (83%) and CETD (73%) are still in use; but only 47% of those in EETD are still in use. Some of the equipments in CETD require repairs, but in other cases, they are broken beyond repair and therefore are not in use.

For Electronics and Mechatronics, all the counterparts felt that Project skills were adequate to meet the current needs of the industry. However, for the Manufacturing and Computer departments, a fifth of the respondents felt that their skills are no longer relevant to today's industrial needs and demand.

Plans to expand and to develop more Advanced Programmes are constrained by equipment as well as the need to train more instructors.

Under the 9th Malaysia Plan (9MP) tenders are being called for new equipment worth RM17 million to expand the programmes at JMTI.

c. Economic and Financial Aspects:

Allocations for operational and development expenditure are provided by the government, through the MoHR. While the government budget allocation has made JMTI sustainable for operational expenses, the development budget allocated to JMTI under the five-year 9MP amounted to only a quarter of the allocation requested for. JMTI is applying for additional funding under the Mid-term Review of the 9MP.

d. Other Aspects:

JMTI is currently working towards achieving ISO 9001. This will enable JMTI to monitor processes to ensure they are effective, keep adequate records, regularly reviewing performance through internal audits and meetings and the quality system itself for effectiveness. JMTI are able to facilitate continual improvement with the documented records. The purpose of acquiring ISO 9001 is to promote standardisation to grow systematically while assuring the quality of their services to customers (in the case the students)

3-2 Factors that have promoted Project

(1) Impact

JMTI's capability has moved beyond training at the L4[1] level and has moved to the L5[2] level.

(2) Sustainability

JMTI has acquired additional land to expand the facilities. The bulk of the development budget allocation under the 9MP has been committed or spent.

3-3 Factors that have inhibited Project

(1) Impact

None

(2) Sustainability

More than half of the counterpart staff that were trained under the Project are no longer with JMTI. Furthermore the large number of vacancies means that the staff: student ratio is high.

The main issue that has affected sustainability is the status of equipment: equipment outdated; unavailability of parts/accessories locally, no local maintenance/repair services etc. This pushes up the maintenance costs as well as upgrading costs which directly affects sustainability.

3-4 Conclusion

The Project purpose of producing skilled industrial technologists at the L4 equivalent level continues to be met. As a result of the Project, JMTI is regarded as one of the leading VTIs in the country. Overall JMTI has managed to be sustainable from the institutional and management, technological, industrial as well as the economic and financial aspects. The Project has enabled the MoHR to expand its vocational training infrastructure and for the counterparts (and ex-counterparts) to train up the skilled industrial technologists to meet the needs of industry.

[1] SKM Level 4 - Supervisory Level (Diploma/Diploma Technology) - "Competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present."

[2] SKM Level 5 - Management Level (Diploma/Advance Diploma Technology) - "Competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation accountabilities for analysis and diagnosis, design, planning, execution and evaluation."

3-5 Recommendations

(1) Recommendations for Malaysian Government

Financial: In order to sustain the Project outcomes, adequate budget must be made available to support the expansion plans of the institute. It is not enough to provide for operational budgets for if there is insufficient development budget allocation provided to replace and upgrade equipments and facilities, the quality of training at JMTI will be impaired and its institutional competency to other vocational training institutions will be reduced.

Institutional: In order to maximise the gains from the training and capacity development of the instructors, MoHR should ensure that the trained counterparts are not transferred, at least for a few years. The suggestion of instituting a "banded scheme" to promote the instructors but keeping them in the institute will ensure that the instructors do not lose out in their career development but at the same time will enable JMTI to benefit from their expertise and grow.

Continuous Training: The MoHR and JMTI should continue to send the instructors for periodic training both locally and abroad to ensure that they are abreast with technological changes. Arrangements for them to be attached to industry will also augment their experience and will bring much added skills to the training environment.

Maintenance: Sufficient funds must be made available for JMTI to conduct periodic preventive maintenance of the equipment and facilities. This also entails ensuring that the instructors are sufficiently equipped and trained to be able to troubleshoot and to carry simple maintenance. A maintenance schedule should also be drawn up and adhered to.

(2) Recommendations for JICA

Organisation: For concluding the Record of Discussions for the technical cooperation, it is recommended that JICA insists that the implementing bodies do not transfer out trained counterpart staff for at least five years to ensure that the Project benefits from the capacity building provided to the counterpart staff.

Technical Support: The arrangement for the JICA Senior Volunteers to assist in the development of JMTI should be continued to ensure that the technological aspects of the Project will be sustained.

Further Training Opportunities: To ensure that the counterparts are keeping up with the technological developments, JICA could continue to provide them opportunities for further training (in Japan) on a cost-shared basis.

3-6 Lessons Learned

Financial: Need sufficient development budget allocation in addition to operations budget for sustainability of the Project.

Institutional: The transfer of the trained counterparts, reduces the benefits of the Project as they do not have the opportunity to put into practice what they have been trained nor to share their new skills with their colleagues. The transfers of the trained counterparts have affected the plans for JMTI to grow into a centre of excellence for the training of skilled technologists for industry. Some form of "banded scheme" needed to enable the trained counterparts to be "promoted" but to remain in JMTI for a few years to pass on the skills to others.

The training of counterparts has to be on an on-going basis. Instructors have to keep up with technological changes and need periodic training. The attachment of JICA Senior Volunteers at JMTI has helped, but a longer term arrangement will have to be put in place.

Technological: To meet the changing needs of industry, JMTI always has to keep up with technological changes and this means having up-to-date equipment and facilities and to keep abreast with the requirements and expectations of the market to ensure the relevance of the training courses.

Others: There is a need to include industial attachment as part of the training programmes for instructors to ensure that they can relate the training with industry needs.

Programmes for preventive maintenance of equipment and facilities on a regular basis should be included in future projects.

3-7 Follow-up Situation

Senior Volunteer Programme

Abbreviations

7MP	Seventh Malaysia Plan
8MP	Eighth Malaysia Plan
9MP	Ninth Malaysia Plan
ADTEC	Advanced Technology Training Centre
ASEAN	Association of South-East Asian Nations
CETD	Computer Engineering Technology Department
ECS	Engineering Consultancy Services
EETD	Electronics Engineering Technology Department
HoD	Head of Department
ITI	*Insitut Latihan Perindustrian* / Industrial Training Institute
IMP3	Third Industrial Master Plan
JICA	Japan International Cooperation Agency
JMTI	Japan-Malaysia Technical Institute
METD	Mechatronics Engineering Technology Department
MfETD	Manufacturing Engineering Technology Department
MoHR	Ministry of Human Resource
MLVK	*Majlis Latihan Vokasional Kebangsaan*/ National Vocational Training Council
NVTC	National Vocational Training Council
PDC	Penang Development Corporation
PSD	Public Services Department
RM	*Ringgit Malaysia*
SMIs	Small and Medium Industries
SV	Senior Volunteer
TAC	Technical Advisory Committee
VTI	Vocational Training Institution
WIM	Written Instruction Material

1. INTRODUCTION

1.1 Project Background

This Ex-Post Evaluation Report of the Japan-Malaysia Technical Institute (JMTI) Project in Malaysia (hereinafter referred to as "the Project") was carried out in March 2007. The Terms of Reference of the project is attached in **Annex 1**.

Initially the JMTI Technical Cooperation Project was for a five-year period, i.e. 15th January 1998 – 14th January 2003. However towards the end of the initial five-year period, some activities in certain important technical fields have not been completed due to late delivery of equipment. The Project was then extended by a year and was terminated only on 14th January 2004. Thus in addition to the Final Report of the Project (dated 14th January 2003), a final Follow-up Project report was produced in January 2004, after the termination of the one-year extension. Both reports outlined the achievement and progress of the activities of the Project, and the results achieved.

It is important to note that the impact of a project after its termination is different from the impact during the time of the project as there are no more "project" resources that can be directed to assist in reaching the goals. Institutional, organisational, political, market and economic factors are likely to influence the outcomes and directions of the project goals and purpose, as well as the institution's performance. Thus, the extent of the project's impact on and sustainability within the organisation and the counterparts is a function of its design and implementation, and its ability to demonstrate its relevance to the organisation's purpose and existence. In this regard, an Ex-Post Evaluation helps in learning how to improve on the design and implementation of future projects. Such an exercise will help both donor and recipient evaluate the facts on whether project elements are still relevant to the core business, particularly the size of the impacts, and whether the outcomes could be sustained.

1.2 Study Objectives

In an Ex-Post evaluation, the most important objective is **to gain an understanding of the impact and sustainability of the project**. In this case, the evaluation is done three years after termination of the Follow-up Project. In undertaking this exercise, JICA has determined that the evaluation should comprise mainly interviews with key stakeholders, i.e. JMTI Management, and Project counterparts. Other inputs, such as examination of records, observations during site visits as well as interviews with Senior Volunteers were compiled to supplement this exercise.

1.3 Key Evaluation Objectives

The JMTI project is featured by the provision of wide range of services making use of professional expertise of several Japanese technical experts in the relevant fields, Malaysian Instructors trained in Japan and several high-tech training equipment donated by the Japanese Government. The services cover diploma courses for high-school leavers, short-term technical and supervisory courses for company employees as well as technical consultancy for SMI managers.

JMTI is sited on a plot of land at Bukit Minyak Industrial Park in the State of Penang, a center of the electronics industry in the country, and the land (with an area of 6.5 hectare) was donated by the State Government in 1997 through Penang Development Corporation (PDC).

The primary objective of JMTI is to produce highly skilled technologists in the fields of advanced technology in manufacturing, electronics, computer and mechatronics. In addition, JMTI aims to assists in the development of local industries, particularly SMIs, through provision of supervisory and continuous skill training for their employees and individual technical consultancy services for their entrepreneurs and managers.

The objective of the evaluation is to verify important issues relating to the impact and sustainability of the Project. The main evaluation questions are listed as follows:

Impact: Achievement of Project Goal since completion

1. How far has the Overall Goal of the Project been achieved since the final evaluation?
2. What kinds of factors have contributed to positive and negative impacts?
3. Besides the Overall Goal of the Project, have the unexpected positive/ negative impacts observed?
4. Are there any external factors that affected the achievement of the Overall Goal?

Sustainability: Continuation of Project activities and services

1. How has the counterpart agency continued the Project activities and service?
2. Have the Project outcomes been maintained since the termination of JICA's assistance?
3. What kinds of the factors contribute to or inhibit the sustainability?

Specific Questions

In addition, the evaluation wanted to know how the recommendations made in the joint final evaluation report on the Follow-up Project dated December 23, 2003 been implemented and to indicate pros and cons, if any.

1.4 Evaluation Team

The Evaluation Team for this study is put together by JICA led by Mr.Yoshinobu IKURA and PE Research Sdn Bhd, comprise Lim Pao Li as consultant and Lim Ai Lee as Researcher.

1.5 Structure of Report

The structure of this report is as follows. **Section 2** discusses the methodologies, particularly the tasks and approaches used in this evaluation. **Section 3** discusses the results of the evaluation, focussing on the two main issues of impact and sustainability. **Section 4** provides a conclusion of the key lessons learned with regards to impact and sustainability, and makes recommendations to resolve the issues that have surfaced during the discussions and interviews.

2. EVALUATION STUDY APPROACH

2.1 Methodology

The principal technique used is the logical framework (Logframe) approach. Specifically, the ex-post evaluation method uses the final evaluation reports as the starting basis. The project goal and purpose are defined as follows:

Project Goal: To satisfy the industrial needs for industrial technologists in the field of high technology.

Project Purpose: JMTI to produce highly skilled industrial technologists (L4 or equivalent) in the fields of high technology in manufacturing, electronics, computer and mechatronics. In addition, JMTI aims to assist in the development of local industries, particularly small and medium industries (SMIs), through provision of supervisory and continuous skill training for their employees and individual technical consultancy services for their entrepreneurs and their managers. For the follow up period, JMTI to enhance the training ability of the instructors to meet the changing industrial needs in the fields of high technology in manufacturing, electronics and mehatronics in the Japan-Malaysia Technical Institute (JMTI).

2.2 Implementation

The following methodologies were used in this ex-post evaluation:

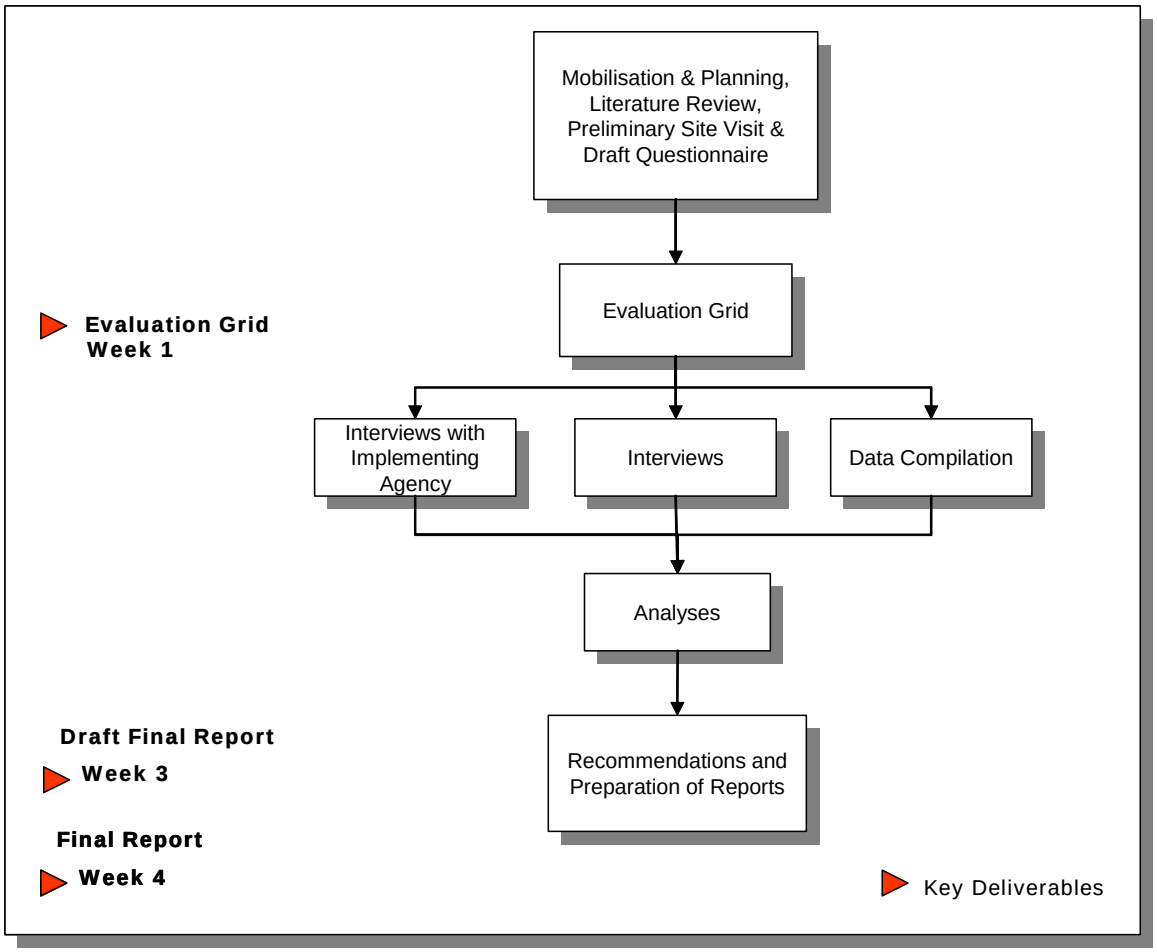
Methodology	Implementation
Preparation of an evaluation grid (Annex 2)	An evaluation grid establishes the main questions of the evaluation. Sub-questions were developed alongside the key questions. Indicators were identified (e.g. quality), and their measures were defined (e.g. low to high). Another key aspect was data requirements, sources of data and method of its collection. Hence, the evaluation grid provided the scope of work that was envisaged at the start of the Evaluation, and thus guided the evaluators in terms of answering the main and sub-questions. The grid was defined without detailed knowledge of the record keeping or documentary procedures or what will be accessible to the study team. The study team also had the benefit of information in the final reports and documents that were prepared during the Project and these were also used to prepare the final evaluation grid.
Surveys and interviews with JMTI and ex-counterparts (Annex 3A, 3B and 3C)	Using the evaluation grid, the survey instruments were then developed based on the main and sub-questions. In this evaluation, two different questionnaires were designed, i.e. to the two levels of impacts – management and counterparts/ex-counterparts. In this study, JMTI management and all available counterparts were interviewed. Some of the counterparts are no longer with JMTI but attempts were made to contact them to survey them too. The Evaluation Team managed to interview/survey 41 out of the 42 counterpart staff members that are still with the institute as well as 12 out of the 55 ex-counterpart staff members that are no longer with the institute. The list of counterparts/ex-counterparts surveyed is shown in Annex 11 while the detailed findings are in Annex 12A.
Survey of employers of JMTI graduates (Annex 3D)	To obtain a feedback on the usefulness of JMTI graduates to industry, attempts were made to survey some of the employers. A total of 6 firms responded to the survey (listed in Annex 11) and he detailed findings are in Annex 12B.

Methodology	Implementation
Checklist of status of equipments and facilities left behind (Annex 4)	In any technical cooperation project, the status of use of the equipment and facilities post-project form an important indication of the relevance of the technology that was delivered, especially after project resources are no longer sustaining their maintenance and upkeep. A checklist of equipment that was handed over/donated to JMTI at the time of the final reports and their status is shown in Annex 4A. An assessment of the state of the equipment was made, and as discussed in Annex 4B of the report.
Organisational review of JMTI and key changes since 2002 (Annex 5)	In order to better understand the results of the evaluation, it is important to have an appreciation of the organisational and institutional changes that occurred since the final reports. The key changes are shown in Annex 5.

2.3 Overview of Work Plan

An overview of the Work Plan for the evaluation is shown in **Figure 2-1**.

Figure 2-1: Overview of Work Plan



3. RESULTS

3.1 Introduction

The Ninth Malaysia Plan (9MP) which was launched in March 2006 continued to give greater emphasis on investment in human capital to sustain economic growth and to drive a knowledge-based economy. The 9MP recognises that a skilled workforce is a prerequisite to enhance Malaysia's competitiveness in attracting foreign director investments and encourage reinvestment. As such, the government intends to enhance the capacity and efficiency of the training delivery system by expanding public training institutions, increasing the number of advance training courses offered, strengthening quality assurance and encouraging greater private sector participation[3].

A total of RM4.8 billion has been allocated under the 9MP for training (8MP: RM4.5 billion). Out of this training budget allocation, 85% is set aside for industrial training[4].

3.2 Evaluation Results

3.2.1 Impact of the Project

The JMTI project is in line with Malaysia's policy thrust and has contributed to increasing the number of public training institutions as well as to increasing the accessibility to industrial skills training. This has contributed to expanding the supply of highly skilled human resource, particularly at diploma and advanced diploma levels to meet the demand for skilled workers. Furthermore the Project has enabled JMTI to raise the level and quality of their services to meet the increasing needs of industry. More detailed discussions of the impact of the Project follows.

3.2.1.1. Achievement of the Overall Goal

Since the Project completion and the final evaluation, JMTI has continued to train and produce industrial technologists in the field of high technology to meet industrial needs. The JMTI qualifications are also recognised by both the National Vocational Training Council (NVTC) as well as the Public Services Department (PSD). The accreditation of the JMTI courses is conducted annually.

While the goal is to produce skilled industrial technologists at the L4[5] equivalent level (Malaysian Skills Diploma Level), since July 2006, JMTI has started to take in trainees for programmes at the L5[6] equivalent level (Malaysian Skills Advanced Diploma Level) too[7]. From the July 1998 intake of 58 students, 15 have graduated from the Electronics

[3] Source: 9MP (2006).
[4] Source: Table 11-8, 9MP.
[5] SKM Level 4 - Supervisory Level (Diploma/Diploma Technology) - "Competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present."
[6] SKM Level 5 - Management Level (Diploma/Advance Diploma Technology) - "Competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation accountabilities for analysis and diagnosis, design, planning, execution and evaluation."
[7] Source: JMTI Business Plan 2006.

Engineering Technology Department (EETD) and 23 from Computer Engineering Technology Department (CETD). From the July 2003 intake of 223 students, 35 graduated from EETD, 42 graduated from CETD, 44 graduated from Mechatronics Engineering Technology Department (METD) and 35 graduated from Manufacturing Engineering Technology Department (MfETD).

The total number of graduates has increased by four-fold from 38 graduates to 156 graduates. By moving to provide training at a higher level, the L5 graduates will be equipped with the necessary competence to be able to take on jobs at the management level.

Feedback from the Management Survey indicates that since Project completion, demand for JMTI courses has been high with more than a thousand applications received each year. In terms of intake and output of JMTI, as shown in **Table 3-1**, since 2002, the intake of students has been around 220 each year, although the planned intake of the project is 200 per annum. However, the intake for 2006 slightly declined to 211.

Table 3-1: Intakes and Graduates

Year of Intake	Electronics		Computer		Mechatronics		Manufacturing		Total	
	I	*G*	*I*	*G*	*I*	*G*	*I*	*G*	*I*	*G*
1998 (July)	26	15	32	23					58	38
1999 (Jan)	17	24	14	28					31	75
1999 (July)	12		27		11	10	13	13	63	
2000 (July)	45	28	48	47	27	19	22	21	142	115
2001 (July)	37	24	53	36	39	28	36	26	165	114
2002 (July)	56	35	53	37	56	39	56	38	221	149
2003 (July)	55	35	60	42	55	44	53	35	223	156
2004 (July)	60	**	57	**	60	**	50	**	227	**
2005 (July)	56	**	58	**	57	**	54	**	225	**
2006 (July)	52	**	50	**	54	**	55	**	211	**
Total	416	161	452	213	359	140	339	133	**1,566**	**647**

** No graduates yet; I = Intake; G = Graduates

Note: Diploma courses are three year programmes while advanced diploma courses are two and a half year programmes.

It is noted that over the years, the rate of graduation has averaged 72%. However the rate varies depending on the field of study. As shown in **Table 3-2**, the graduation rate has been lowest from the electronics department (averaging 65%) while the average graduation rate from the other three departments average 74%.

Among the reasons cited for the "drop-out", i.e. failure to complete the training[8], are:

- Trainees being accepted by universities or other institutes of higher learning;
- Failure to pass examinations;
- Sicknesses; and
- Asked to leave the institute because they repeatedly because broke rules.

[8] Source: JMTI Activity Report 2005 and Final Report of JMTI Technical Cooperation Project (Follow-up), 14th January, 2004.

Table 3-2: Rate of Graduation (Percentage of Graduates/Intake)

Year of Intake	Electronics	Computer	Mechatronics	Manufacturing	Total
1998 (July)	58%	72%			66%
1999 (Jan)	83%	68%			80%
1999 (July)			91%	100%	
2000 (July)	62%	98%	70%	95%	81%
2001 (July)	65%	68%	72%	72%	69%
2002 (July)	63%	70%	70%	68%	67%
2003 (July)	64%	70%	80%	66%	70%
Total	65%	74%	74%	74%	72%

Source: JMTI Management Survey, Q.1.2.

The main purpose of the JMTI training is to equip the graduates with adequate skills to meet the industry needs. Although JMTI does not maintain systematic statistics that track the graduates, a snapshot of the situation from the 2006 Tracer Study conducted by the Engineering Consultancy Services (ECS) department of JMTI however shows that out of the 76% of the 301 respondents are employed, 17% went for further studies and only 7% are unemployed (see **Table 3-3**). Analysis by department shows that those from the manufacturing department had the highest rate of employment (89%) while those from the mechatronics department had the lowest rate of unemployment (2%).

Table 3-3: Status of JMTI Graduates by Year of Intake and Department

	Employed		Further Studies		Unemployed		Response		
Intake	No.	%	No.	%	No.	%	No.	%	Total
July 1998	7	54	4	31	2	15	13	36	36
Jan 1999	3	100	-	-	-	-	3	12	25
July 1999	24	83	4	14	1	3	29	57	51
July 2000	65	76	14	16	7	8	86	76	113
July 2001	63	79	17	21	-	-	80	73	109
July 2002	68	76	12	13	10	11	90	70	129
Total	**230**	**76**	**51**	**17**	**20**	**7**	**301**	**65**	**463**
Manufacturing	56	89	4	6	3	5	63	71	89
Mechatronics	41	82	8	16	1	2	50	57	88
Computer	65	66	23	23	10	10	98	64	153
Electronics	68	76	16	18	6	7	90	68	133

Source: ECS Tracer Studies

Another snapshot of the status of the 2005 and 2006 graduates (conducted during their convocation) shows that out of the 276 that responded to the 2006 tracer survey, 74% are working, 14% have gone for further studies while 13% are still looking for jobs as shown in **Table 3-4**. Of those that are working, 91.1% are in the private sector, 6.4% in the public sector while 2.5% are self-employed. The average income for the graduates is in the range of RM1,201 – 1,500 although 17% are earning above RM1,500. Most (71%) of the graduates are working as technicians, while 8% are employed as engineers/assistant engineers[9].

[9] See Annex 6 for details of Tracer Study on JMTI 2005 and 2006 graduates.

Table 3-4: Status of JMTI 2005 and 2006 Graduates

Department	Working	Further Study	Looking for Job	Total Analysis
Manufacturing	55	6	4	65
Mechatronics	52	13	10	75
Computer	45	11	16	72
Electronic	51	8	5	64
Total	**203**	**38**	**35**	**276**
	74%	14%	13%	

Source: JMTI

The ex-post self-assessment by the JMTI management nonetheless indicates **improvements in JMTI's capability to train highly skilled industrial technologists** (L4 or equivalent) for all four fields of study since project completion (and final evaluation)[10]. While 74% of the counterparts and ex-counterparts concur with the management's assessment on JMTI's capability, 26% of the respondents rated JMTI's capability as "average".[11]

JMTI management also rated themselves "high" in terms of the instructors' capabilities in curriculum development, professional skills, teaching materials, teaching methods, class preparation, course management and training evaluation since Project completion[12]. While more than half of responding counterparts/ex-counterparts concur with most of the aspects on their capabilities, only 45% gave "high" ratings for "course management"[13].

The impact of the JMTI Project is also measured by benchmarking JMTI against other vocational training institutes (VTIs). In all criteria, i.e. technology, facilities, instructors and courses, and fields of training, JMTI management **self-rated themselves better** than other VTIs which are offering similar training courses in Malaysia[14]. Feedback from the employers indicated that they rated JMTI's training programme as comparable or better compared to the other training institutions[15].

The JMTI management assess that the Project has a **very important impact on the human resource supply situation** as the fields of study are still being focussed under the Third Industrial Master Plan (IMP3) and that under the 9MP the projection for skilled workers is high[16]. The training courses are still valid since the Project completion, but the syllabi for all the departments have been revised in 2005. The JMTI tries to keep abreast with the skill needs of industry through the semi-annual meetings with the Technical Advisory Committee (TAC), which has members from industry, as well as through on-job (attachment) visits. This is as recommended by the Joint Final Evaluation Report on the Follow-up Project.

During the period 2004 – 2006, the capability of JMTI to produce highly skilled technologists has been subject to three evaluations: (i) by the Manpower Department of MoHR (Tracer Study); (ii) by JICA (JICA Survey on JMTI/ITI/Other Institutions under MoHR); and (iii) by EPU (Vocational Training Effectiveness). While JMTI has been considered as a leader for vocational training among VTIs under the MoHR, there were concerns that the equipments are outdated and that the library resources are fairly limited. Furthermore, they face high turnover of instructors[17].

[10] JMTI Management Survey Q1.3
[11] See Annex 12A Table 5.
[12] JMTI Management Survey Q1.4
[13] See Annex 12A Figure 1.
[14] JMTI Management Survey Q1.5.
[15] JMTI Employer Survey Q14.
[16] JMTI Management Survey Q1.6.
[17] PE Research (2005): Baseline Survey on Vocational Training Institutions.

As such, although JMTI have plans to expand and develop more advanced programmes, they are constrained not only by equipment (need new equipments to keep up with technology changes) but also be instructors (need more training as well as greater exposure to industrial experience). In fact, many of the key instructors, trained by the Project are no longer with JMTI[18].

Feedback from the counterparts show that 59% of the respondents spend more than half of their working time using the Project equipment or skills acquired[19]. However, for the ex-counterparts, the percentage is reduced to less than 25% of the time. This is expected as those that are transferred, especially on promotion, will be doing more management work.

3.2.1.2. Factors Contributing to the Impacts

One of the key issues that have affected the achievement of the overall Goal are the **institutional and management changes** in JMTI. While the director and some senior management of JMTI have been with the institute since the Project, it is of concern that 57% of the counterparts are no longer with JMTI. Out of the 55 who are no longer with JMTI, 51 have been transferred to other training institutions or to the MoHR, while four resigned. Some of the transfers were on promotion, others requested for the transfers on personal and other reasons[20]. This leaves only 42 (43%) with JMTI. **Table 3-5** summarises the current counterpart status.

Table 3-5: Analysis of Status of Counterpart Staff Trained

Fields	No. of Staff trained by Project	No. of staff still with JMTI (interviewed)	No. of staff no longer with JMTI
Manufacturing	30	14 (13)	16
Electronics	18	8 (8)	10
Computer	17	6 (6)	11
Mechatronics	29	13 (13)	16
Management	3	1 (1)	2
Total	97	42 (41)	55
Percentage		43%	57%

Source: JMTI Management Survey, Q.2.4

For 2007, JMTI has a total of 176 approved posts but only 129 (73%) are filled (**Table 3-6**). In addition, 11 staff members are on loan to JMTI while there are 8 transit staff members there, bringing the total staff strength to 148. While the overall percentage of vacant position is 27%, the computer department has a total of 12 (40%) unfilled posts. As such although the planned instructor: student ratio was 1: 5, the actual situation is nearer 1: 15[21].

As a result of the shortage of instructors, we find that although the average number of courses taught by the counterparts is two, there are counterparts indicating that they are teaching more than 10 courses, while six instructors are teaching between 6-10 courses[22]. In contrast, only one ex-counterpart that responded indicated that he is teaching 5 courses while the others are teaching between one and two courses. The reference materials are in English, but about 70% of the language of instruction at JMTI is in Malay at JMTI.

[18] JMTI Management Survey Q6.9. See Annex 10 Table A2 for list of ex-counterparts and where they are presently attached.
[19] See Annex 12A Table 10.
[20] JMTI Ex-counterpart Survey; see Annex 12A Table 3.
[21] Although the recommended staff/student ratio for soft skills is 1:15, the recommended ratio for those working with machines is 1:10 (discussions with JMTI).
[22] See Annex 12A Table 8.

Table 3-6: Staff Strength at JMTI (2007)

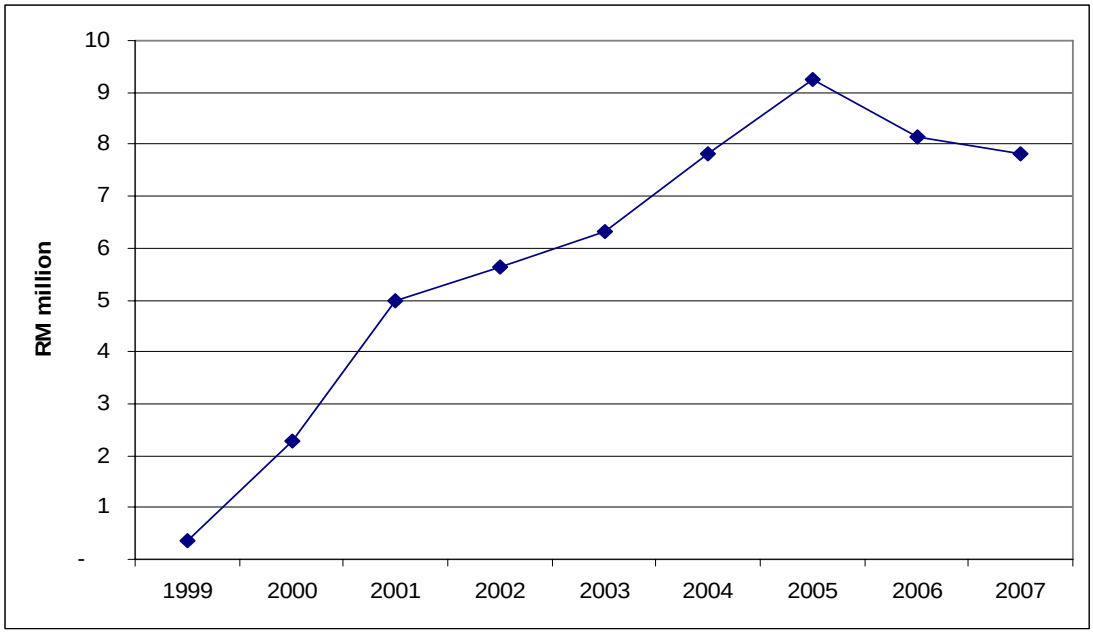
Department	Total No. of Posts	Total No. of Filled Posts	Total No. of Unfilled Posts	% Vacant
Mechatronics	37	26	11	30%
Computer	30	18	12	40%
Electronics	29	19	10	34%
Manufacturing	34	24	10	29%
Others	46	42	4	9%
Total	176	144	47	27%

Source: JMTI

Another factor that contributes to the impact of the Project is **financial aspect**. Both the operating and development budgets for JMTI are from government allocations. Since the Project completion, the annual **operating budget allocation** has increased from RM 6.3million (2003) to RM9.2 million in 2005, before declining to RM7.8 million (2007) as shown in **Figure 3-1**.

However, under the 9th Malaysia Plan (9MP), JMTI has been allocated only a **development budget** of RM26 million although the application was for RM100 million. Of this, RM5 million has been utilised to pay for the land for expansion of the institute, while RM17 million has been committed for equipment (being tendered) to expand the programmes at JMTI. This leaves only RM4 million for the rest of the 9MP period and certainly insufficient to build additional facilities on the new land that has been acquired.

Figure 3-1: JMTI Budget Allocation for Operations



3.2.1.3. Unanticipated Impacts Observed

On the **positive side**, due to the training received by the counterparts on the Project many of them have been upgraded in their posts while some have been promoted to head other ITIs throughout the country. This has benefited the career development of individual counterparts[23] and has also enabled the MoHR to staff the new VTIs (both ITIs and ADTECs)

[23] JMTI Counterpart Survey Q2.1.

that have been set up. In some cases, while the new VTIs are being set up the promoted counterparts continue to be attached with JMTI as transit staff.

Since the Project completion, the institute has been able to offer services to private sector[24]. These services are:

- Renting out computer labs and measuring equipments[25];
- Providing consultancy services through the engineering consultancy services department; and
- Short-term training course to approximately 300 participants each year[26].

From these services rendered to the private sector, especially the customised short-term training courses, JMTI has earned revenue for the JMTI Trust fund[27].

On the **negative side**, the transfers and promotions of the ex-counterparts meant that JMTI has lost many of the experienced instructors (as discussed in the previous section).

3.2.2 Sustainability of the Project

How is the sustainability of the Project? How has JMTI continued the Project activities and services? What kinds of the factors contribute to or inhibit the sustainability?

The Management and Counterpart/Ex-counterpart survey and interview findings as well as the interviews with the JICA Senior Volunteers and with some of the Employers of JMTI graduates shed some light on the sustainability of the Project since the completion. These findings are analysed from the institutional and management aspect, the technological aspect, the industrial aspect, as well as the economic and financial aspect.

3.2.2.1. Institutional and Management

Demand for JMTI courses has been high and more than a thousand applications are received each year. Despite the loss of trained counterpart staff, due to transfers, the management survey reported that the skills learned during the Project have been widely shared with other new staff as well as with other MoHR institutes[28]. The sustainability of the Project is shown in their ability to develop (i) programme curricula for Levels 4 and 5; (ii) in-house training programmes; (iii) syllabi and written instruction material (WIM) for teaching; and (iv) internship programmes.

Feedback from the counterpart staff show that about half of them have trained other JMTI staff and staff from other MoHR training institutes using the skills that were acquired during the Project. Similarly, about third of the ex-counterparts that responded also indicated having rained JMTI staff and staff at their current institute. This demonstrates the some degree of sustainability of the Project even after Project completion (see Annex 12A Table 11).

The capacities of counterparts and ex-counterparts have been built during the Project through various forms of training. The key question is whether those skills have been sustained since the Project completion. Sustaining skills learned is important in the industrial

[24] All ICT-related short-term training courses provided to industry players are free of charge.
[25] See Annex 7 for List of Firms Renting Equipment from JMTI.
[26] See Annex 8 for Short Courses offered.
[27] Revenue earned from customised short-term training course, equipment rental and consulting services to industry contribute to the JMTI trust fund which is used to cover cost of instructors (overtime), utilities and part of the equipment costs.
[28] JMTI Management Survey Q4.2.

field because technology keeps changing all the time, and concomitantly skills upgrading is necessary if they are to be relevant to the needs of industry.

Table 3-7 shows the response to the question of skills upgrading since Project completion. Tabulating the response by department shows that skill upgrading has been high with 85% of the counterpart staff in the Mechatronics department having received additional training. For the other departments, the percentage ranges from two-thirds for those in computer department, to 61.5% for those in the Manufacturing department and 50% for those in the Electronics department.

Table 3-7: Counterpart Skill and Knowledge Upgrading since Project Completion

	Percent	n
Management	100.0	1
Manufacturing	61.5	13
Electronics	50.0	8
Computer	66.7	6
Mechatronics	84.6	13
Average	**68.3**	**41**

Source: Counterpart Survey, Q.3.1

3.2.2.2. Technological Aspects

Overall 68% of Project staff received training to upgrade and expand their skills and knowledge which they have acquired through the Project since Project completion. Eleven project staff have received training in other countries (Japan, Germany and UK); seven were trained in Malaysia while ten received in-house training. The management survey reported that the Project facilities and equipment are adequately maintained and that they do not face any issue in sustaining the Project outcomes. However their plans to expand and to develop more Advanced Programmes are constrained by equipment as well as the need to train more instructors. In order to keep abreast with changes in technology, there is need for new equipment. The instructors also need to have industry exposure and more training to keep up with the technological changes[29]. Furthermore the Evaluation Team was informed that in some cases the equipments are outdated and need to be replaced. With technology changes in industrial operations, the issue of replacement versus maintenance will have to come into JMTI's consideration at some point in time. Feedback from the interviews with the Senior Volunteers highlighted that the IT systems from the Project are out-of-date and need to be upgraded in order to keep apace with technological changes. They pointed out that the concept of depreciating off the equipment should be instituted to deal with this. Under the 9MP, tenders have been called for equipment worth RM17 million.

Table 3-8 summarises the status of Project equipments by department. While most of the equipments in the METD (100%), MfETD (83%) and CETD (73%) departments are still in use, only 47% of those in EETD are still in use. Some of the equipments in CETD require repairs, but in other cases, the equipments are broken beyond repair and therefore are not in use.

Table 3-8: Status of Project Equipment List

[29] JMTI Management Survey Q 4.4 and Q5.3.

	% Equipment Still In Use	Repairs Required	Others
Computer (15)	73%	7%	20%
Electronics (17)	47%	-	53%
Manufacturing (12)	83%	-	17%
Mechatronics (14)	100%	-	-

Source: Equipment in Use and Maintenance List (see Annex 4A)
Note: % equipment in use is all useable equipment by all equipments donated; whereas the next 2 columns are row percentages, and refer to those equipment not in use. Others refer to no information, incomplete, cannot use, no current application, and missing.

For Electronics and Mechatronics, all the counterparts felt that Project skills were adequate to meet the current needs of the industry. However, for the Manufacturing and Computer departments, a fifth of the respondents felt that their skills are no longer relevant to today's industrial needs and demand.

To some extent, the life span of the equipments can be enhanced with regular preventive maintenance of the equipment. However, it seems that since Project completion, none of the equipments in the Computer Departments were maintained at all. For the equipments in the other departments, feedback from JMTI shows that maintenance was carried out in 2004 and 2005, but there are no records of any maintenance being carried out in 2006 as summarised in **Table 3-9**.

Table 3-9: Status of Equipment Maintained (2004 to 2006)

	2004	2005	2006	Description of maintenance
Computer (15)	-	-	-	
Electronics (17)	1	1	-	Same equipment in both years
Manufacturing (12)	-	3	-	Full system maintenance, configure and calibrate
Mechatronics (14)		5	-	Preventive Maintenance (Servicing, Re-aligning, Greasing, Back-up battery, Software & Programming Flushing, Parts wear & tear). Breakdown Maintenance (Servo Motor)

Source: Equipment in Use and Maintenance List (Annexes 4A & 4B)

3.2.2.3. Industrial Aspects

Feedback received from firms surveyed indicated that all the employers were satisfied with the training at JMTI and that they would hire more graduates from JMTI as well as will recommend JMTI training/graduates to other employers. In addition, the employers suggested JMTI that the industrial training (on-the-job training) be extended to at least four months, to give the trainees more time to gain working experience and exposure[30].

Feedback from Counterparts provided some views on whether technology transfer and their current level of skills met the demand by industry as summarised in **Table 3-10**. This issue is also highlighted by the Senior Volunteers as they stress on building up collaboration and a closer relationship with the industry. In addition, investigation of needs and demands of the industry should be carried out regularly.

Table 3-10: Whether Available Skills Meet Current Industrial Demand

[30] See Annex 12B for findings from Employers' Survey.

	% Technology transfer and project skill meets current industrial needs & demand	n
Management	100.0	1
Manufacturing	84.6	13
Electronics	100.0	8
Computer	83.3	6
Mechatronics	100.0	13
Average	**92.7**	**41**

Source: Counterpart Survey, Q.4.1

3.2.2.4. Economic and Financial Aspects

As JMTI reports to the Ministry of Human Resources, funds for both operational and development expenditure are provided by the government, as discussed earlier. While the government budget allocation has made JMTI sustainable for operational expenses, the development budget allocated to JMTI under the five-year 9MP amounted to only a quarter of the allocation requested for. This will affect the plans to upgrade (and replace) the equipment, unless additional funding is allocated.

From the development budget allocation JMTI has managed to acquire additional land for the expansion of the institute. However to date they do not have the development funds to construct the facilities. The management informed the Evaluation Team that additional funds are being applied for under the Mid-term Review of the 9MP.

In the Final Report of the (Follow-up) Project it was envisaged that a self-help mechanism may be taken into account to strengthen the financial position of JMTI. In this respect, JMTI has managed to earn some revenue from short-courses for industry as well as from renting out equipment and providing services to industry.

3.2.2.5. Other Aspects

As in the case of all the other VTIs under the MoHR, JMTI is currently working towards achieving ISO9001. This will enable JMTI to monitor processes to ensure they are effective, keep adequate records, regularly reviewing performance through internal audits and meetings and the quality system itself for effectiveness. JMTI are able to facilitate continual improvement with the documented records. The purpose of acquiring ISO 9001 is to promote standardisation to grow systematically while assuring the quality of their services to customers (in the case the students).

3.3 Status of Implementation of Recommendations of Final (Follow-up) Report

The key recommendation of the Final (Follow-up) Report is that “the key counterparts should remain in JMTI to maintain and develop the technological knowledge and experiences transferred from the Japanese experts and the training from Japan”. While it is not expected that all the counterparts continue to be with JMTI, the fact that 57% of those trained are no longer with JMTI, three years after the (follow-up) Project completion, is of concern. Fortunately out of the 16 senior management staff, 75% were counterparts, and if the transfers can be reduced, it will give JMTI counterparts the time to pass on their skills and train other new staff.

The Final (Follow-up) Report also recommended “continuous effort to supply training courses that meet the current industrial needs”. The JMTI Technical Advisory Committee with members from industry provides an avenue for JMTI to keep abreast of the technology needs of industry. JMTI has also been conducting short courses for industry and this provides opportunities for them to build up the relationship with industry. In addition, each year JMTI has been holding Job Fairs to boost employment opportunities for the graduates and at the same time to network with industry. The number of companies that participate in the Job Fair has increased from 16 companies (in 2003) to 33 companies in 2006. The firms that have participated in the Job Fairs are listed in **Annex 9**.

4. CONCLUSIONS

4.1 Observations and Lessons Learned

Through this ex-post evaluation exercise, the Evaluation Team has found that three years after Project completion, the Project goal of producing skilled industrial technologists at the L4 equivalent level continues to be met. As a result of the Project, JMTI is regarded as one of the leading VTIs in the country. Overall JMTI has managed to be sustainable from the institutional and management, technological, industrial as well as the economic and financial aspects. The Project has enabled the MoHR to expand its vocational training infrastructure and for the counterparts (and ex-counterparts) to train up the skilled industrial technologists to meet the needs of industry.

The JMTI management has demonstrated that they have ownership of the Project as they continue to strive to make JMTI one of the best VTI under the MoHR. They are however facing many challenges, and these provide lessons to be shared and learned.

Likewise, the counterparts and ex-counterparts acknowledged the usefulness of the Project training and that it has enhanced their overall capability with respect to professional skills, teaching methods, preparing teaching materials, developing curriculum, as well as installing, managing, maintaining machinery and equipment. Furthermore, they have been sharing the knowledge not only with the other instructors at JMTI but with other VTIs too. Many of the counterparts have been promoted thus demonstrating the recognition of the skills gained and their added capabilities.

The Evaluation Team found that over the last three years, many of the counterparts have been transferred (while some have resigned), and this has affected JMTI especially from the point of view of sustainability. However, it is noted that many of the ex-counterparts are still in service with some heading other VTIs, and as such is not a total loss to the MoHR as the ex-counterparts have brought the skills and experience from the Project to their current institutions.

It is also noted that JMTI has benefited from the attachment of JICA Senior Volunteers there as they have brought with them a wealth of experience and although they are not directly involved in instructions/teaching, they are contributing significantly in preparing written instruction material and training the instructors.

To augment the overall observations on the impacts and sustainability of the Project, the Evaluation Team has grouped the lessons learned under four areas:

(1) **Financial:** While it appears that the operations of JMTI is sustainable through the government budget allocation, the approval for only a quarter of the development budget applied for to fund infrastructure facilities and equipment will have a long-term impact on the sustainability of the institute.

(2) **Institutional**: While recognising that the staff of JMTI are transferable, the transfer of the trained counterparts, some quite soon after completing their training under the Project, thus they do not have the opportunity to put into practice what they have been trained and to share their new skills with their colleagues. Most of these transfers are on promotion, which means that they will spend more time on management aspects rather than on teaching/instructing.

The JMTI management acknowledges that the transfers of the trained counterparts have implications on the plans for JMTI to grow into a centre of excellence for the training of skilled technologists for industry. Some form of "banded scheme" should be instituted to enable the trained counterparts to be "promoted" (and thus not to lose out in their career development) but to remain in JMTI at least for a few years to pass on the skills to others.

It is noted that the counterparts have upgraded or expanded their skills and knowledge which they have acquired through the Project, through further formal training since Project completion. The training of counterparts has to be on an on-going basis. Instructors will need to keep up with technological changes and need periodic training. The attachment of JICA Senior Volunteers at JMTI has helped to some degree, but a longer term arrangement will have to be put in place.

(3) **Technological**: For JMTI to be current and to able to produce graduates that can meet the changing needs of industry, it always has to keep up with technological changes and this means ensuring that the equipment and facilities are up-to-date. Otherwise there is a danger of JMTI not being able to keep abreast with the requirements and expectations of the market. This in turn will have an impact on the relevance of the training courses.

(4) **Others**: Observations from the Senior Volunteers of the limited communication (and language[31]) skills of the instructors as well as their lack of industry exposure needs to be addressed.

There is a need to include industrial attachment as part of the training programmes for instructors to ensure that they can relate the training with industry needs. Programmes for preventive maintenance of equipment and facilities should be included in future projects to ensure that they are in good working condition needs to be carried out on a regular basis.

4.2 Recommendations

In coming up with recommendations for the Project, the Evaluation Team takes into consideration the impact and sustainability of the Project as well as the lessons learned from the ex-post evaluation exercise. The recommendations also take into consideration that JICA's role and activities in Malaysia may be limited to the fielding of volunteers and experts in specialised areas to support capacity building and the transfer of technical and industrial skills for the development of the manufacturing sector. Nonetheless it is hoped that the recommendations will be useful for the formulation of future projects in a similar context.

4.2.1 Recommendations for MoHR and JMTI

Financial: In order to sustain the Project outcomes, adequate budget must be made available to support the expansion plans of the institute. It is not enough to provide for operational budgets for if there is insufficient development budget allocation provided to replace and upgrade equipments and facilities, the quality of training at JMTI will be impaired and its institutional competency to other vocational training institutions will be reduced.

Institutional: In order to maximise the gains from the training and capacity development of the instructors, MoHR should ensure that the trained counterparts are not transferred, at least for a few years. The suggestion of instituting a "banded scheme" to promote the instructors but keeping them in the institute will ensure that the instructors do not lose out in their career development but at the same time will enable JMTI to benefit from their expertise and grow.

Continuous Training: The MoHR and JMTI should continue to send the instructors for periodic training both locally and abroad to ensure that they are abreast with technological

[31] The language of instruction is in mainly in Malay, but the reference materials are in English.

changes. If necessary, the future training could be on a cost-shared basis. Arrangements for them to be attached to industry will also augment their experience and will bring much added skills to the training environment.

Maintenance: Sufficient funds must be made available for JMTI to conduct preventive maintenance of the equipment and facilities. This may entail ensuring that the instructors are sufficiently equipped and trained to be able to carry out the maintenance. A maintenance schedule should also be drawn up and adhered to.

4.2.2 Recommendations for JICA

Organisation: For concluding the Record of Discussions for the technical cooperation, it is recommended that JICA insists that the implementing bodies do not transfer out trained counterpart staff for at least five years to ensure that the Project benefits from the capacity building provided to the counterpart staff.

Technical Support: The arrangement for the JICA Senior Volunteers to assist in the development of JMTI should be continued to ensure that the technological aspects of the Project will be sustained.

Further Training Opportunities: To ensure that the counterparts are keeping up with the technological developments, JICA could continue to provide them opportunities for further training (in Japan) on a cost-shared basis.

Annex 1: Terms of Reference

Ex-Post Evaluation Study on the Japan-Malaysia Technical Institute Project in Malaysia

1. Outline of the Targeted Project

Title of the Targeted Project: The Japan-Malaysia Technical Institute Project in Malaysia

Malaysian Implementing Agency: Manpower Department, Ministry of Human Resources, Malaysia

Technical Cooperation Period from JICA:
Initial Period: 15 January 1998 – 14 January 2003 (five years)
Follow-up Extension: 15 January 2003 – 14 January 2004 (one year)

Project Site: Japan-Malaysia Technical Institute (JMTI)
Lorong PBM 15, Bukit Minyak Industrial Zone
14100 Seberang Perai, Penang State, Malaysia

Background

In the late 1980s, the Malaysian economy experienced rapid and continued growth until before the Asian financial crisis began in mid-1997, owing to the successful government efforts for attracting foreign investment. Faced with intensifying shortages of manpower and increasing dependency on foreign labour, however, the government changed its policy focus onto the development of high-tech and labour saving economy in the early 1990s. In the Seventh Malaysia Plan (1996-2000) more emphasis has been placed on restructuring of the country's manufacturing sector by encouraging foreign investment in high-tech areas and upgrading of the skill levels of its workforce.

A Human Resources Development Plan has been formulated so as to meet the manpower demand and requirements of this sector and to train more workers for high-tech jobs. In line with government policy, the Manpower Department under the Ministry of Human Resources has taken positive steps to achieve targets of the Plan by establishing new Advanced Technology Centres (ADTEC), among which is the Japan-Malaysia Technical Institute (JMTI).

In 1993, the Malaysian Government's proposal to establish JMTI was conveyed to the Japanese Government. In August of the next year, then Japanese Prime Minister, Mr Muruyama visited Malaysia in his tour of ASEAN countries and promised to his counterpart Dato' Seri Dr Mahathir Mohamed that the Japanese Government would cooperate to materialize the proposal. Subsequently a Technical Cooperation Accord for the establishment of JMTI was concluded and signed by representatives of

both governments in 1997. Thus technical cooperation based on the Accord stared in January 1998 as a government-to-government project extending over the next five years.

JMTI is sited on a plot of land at Bukit Minyak Industrial Park in the state of Penang, a centre of the electronics industry in this country, and the land (with an area of 6.5 hectares) was donated by the State Government in 1997 through Penang Development Corporation (PDC).

Master Plan of the Project

- Overall Goal: To Satisfy the Industrial needs for industrial technologies in the field of high technology.

- Project Purpose: To produce highly skilled industrial technologists (L4 or equivalent) in the fields of high technology in manufacturing, electronics, computer and mechatronics in the Japan-Malaysia Technical Institute (hereafter referred to as “JMTI”)

- Output of the Project:

(1) Systematic vocational training is planned at JMTI.
(2) Measures to enroll qualified trainees established.
(3) Necessary numbers of qualified instructors in the above fields are trained for JMTI.
(4) Necessary training courses in the above fields are identified, prepared and conducted.
(5) Adequate facilities, machinery and equipment for training are prepared and made operational.
(6) JMTI is well managed in terms of organization, personnel and finance

- Activities of the project

(1) Relating to (1) mentioned above
  (a) To analyze the current situation of high technology industries in Malaysia.
  (b) To clarify vocational training program required by the Malaysian Industries.
  (c) To design vocational training program adapted to the Malaysian industrial needs

(2) Relating to (2) mentioned above
  (a) To prescribe the qualifications and requirements for JTMI applicants.
  (b) To carry out promotional and public relations activities on JMTI to recruit potential applicants.
  (c) To conduct recruitment and selection of JMTI trainees.

(3) Relating to (3) mentioned above
  (a) curriculum development;
  (b) professional skills;
  (c) development of teaching materials;
  (d) teaching methods;
  (e) method of the class preparation;
  (f) method of the course management; and

(g) method of the training evaluation.

(4) Relating to (4) mentioned above
(a) To develop the curricula of training courses.
(b) To conduct training courses.
(c) To evaluate training courses.
(d) To improve training courses when necessary.

(5) Relating to (5) mentioned above
(a) To prepare and install machinery and equipment.
(b) To manage and maintain facilities, machineries and equipment.

(6) Relating to (6) mentioned above
(a) To set up the Joint Coordinating Committee and convene it at least once a year.
(b) To set up the Technical Advisory Committee and convene it at least twice a year.
(c) To appoint proper personnel.
(d) To monitor management regularly.
(e) To formulate an annual plan of operation.

2. Purpose of the Study

(1) Title of the Study: The Ex-Post Evaluation Study on the Japan-Malaysia Technical Institute Project in Malaysia (hereinafter referred to as "the Study")

Purpose: The Study is expected to verify the important issues relating to the project impact and sustainability observed after three (3) years from the completion of the Project. The results of the Study contribute to the better-informed decision-making based on the lessons learned, and the promotion of the greater accountability. The results will also be shared with JMTI and MoHR.

3. Implementation of the Study

The Study will be carried out considering the following items:

(1) Main Evaluation Questions
The Study will seek answers to the following main evaluation questions:

a. Impact

- How far has the Overall Goal of the Project been achieved since the final evaluation?

- What kinds of factors have contributed to positive and negative impacts?

- Besides the Overall Goal of the Project, have the unexpected positive/ negative impacts observed?

- Are there any external factors that affected the achievement of the Overall Goal?

b. Sustainability

- How has the counterpart agency continued the Project activities and service?

- Have the Project outcomes been maintained since the termination of JICA's assistance?

- What kinds of the factors contribute to or inhibit the sustainability?

c. Specific questions

- How recommendations made in the joint final evaluation report on the Follow-up Project dated December 23, 2003 has been implemented? Pros and cons, if any.

Suggested/ Required Evaluation methods

The Consultant is responsible for identifying specific evaluation methods of data collection. It is suggested that actual inquiries use the methods, which can assess both quantitative and qualitative measurements of the changes. The Consultant is requested to come up with the objectively variable indicators to measure up these changes. In addition to that, it is important to investigate the factors that positively and negatively contributed to the changes. Data and information will be collected through the surveys including the following:

a. Site visit to JMTI and/or other authorities concerned.

b. Questionnaire surveys and Interviews with JMTI counterpart/ex-counterpart who worked together with the JICA Experts, and also who were trained in Japan.

c. Qualitative investigations to measure the Project impacts, such as;

- numbers of trained counterparts in each field

- numbers of reports prepared by JMTI

- budget allocation for the Project activities

JICA requires that all evaluation studies present the recommendations and the lessons learned in the Evaluation Report based on the qualitative and quantitative analysis. The recommendations should document practical and specific suggestions to improve the Project that is subject to evaluation. On the other hand, the lessons learned present specific suggestions for the formulation of future projects in a similar context.

4. Implementation Schedule

The Study is scheduled to commence from the beginning of March 2007, and complete by the end of March 2007.

JICA estimates the total amount of man-month (M/M) required for the Study approximately as follows:

- Leader: 0.30M/M
- Researcher/ Evaluation Analysis: 1.00M/M

5. Deliverables

The Consultants shall submit the following deliverables to JICA.

(1) Evaluation Grid

The evaluation Grid is to be prepared within 5 days of the first meeting with JICA and to be presented by 6 March 2007. The Consultants will be requested to modify their evaluation planning if JICA finds it inappropriate.

(2) Draft Evaluation Report

The Consultants shall submit the 5 copies of the Draft Evaluation Report to JICA Malaysia Office. The comments on the report will be given by JICA, JMTI and the authorities concerned, and will be sent back to the Consultants for the revision of the report.

(3) Evaluation Report

The Consultants shall submit the Evaluation Report to JICA Malaysia Office by 30 March 2007.

- 5 copies in printed format

- 2 copies in CD-ROM (PDF format)

It should be concise and be no longer than 15 pages in A4 size form. The evaluation results and conclusions should be supported by the data gathered through the interviews and questionnaires and/or the additional information and data. The graphic presentation of data is recommended wherever applicable. The report should include the following issues;

- Scope of evaluation study
- Project overview
- Evaluation methods used
- Results of evaluation
- Conclusions
- Recommendations
- Lessons learned
- Annex (Logical Framework, Evaluation Grid and supporting data)

Evaluation Summary Sheet

The Consultants shall submit the Evaluation Summary Sheet to JICA Malaysia Office. It should be prepared in accordance with the format which will be provided by JICA.

Annex 2: Evaluation Grid

Ex-Post Evaluation Study on Japan-Malaysia Technical Institute Project in Malaysia, 2007

(Key: CP = Counterpart Survey; EC = Ex-counterpart Survey; MS = Management Survey; SV = Senior Volunteer)

	Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
	Main Questions	**Sub-Questions**				
IMPACT	1. How far has the Overall Goal[32] of the Project been achieved since the final evaluation?	- How many highly skilled industrial technologists graduated from JMTI since the last evaluation? **(MS1.1 & 1.2)**	Compare the number of industrial technologists graduated from the year 1998.	- Number of trained technologists by discipline & by year graduated	- Statistics from MoHR - JMTI Management	- Literature & Document Search - Interviews with JMTI Management
		- What is the level of JMTI to train highly skilled industrial technologists since project completion? **(MS1.3)**	1 = Lower than project completion; 2 = Same as project completion; 3 = Improve	- JMTI's self assessment of their capabilities - Counterparts and Ex-counterparts assessment of JMTI's capabilities	- JMTI Management - Counterparts and Ex-counterparts	- Interviews with JMTI Management - Counterpart Survey - Ex- Counterpart Survey
		- To what extent has this Project succeeded in enhancing your capability in providing such services in Malaysia? **(CP1.1, 1.2 & 1.5; EC1.1, 1.2 & 1.5)**	Rank 1 (Low) to 5 (High) for: i) Curriculum Development ii) Professional Skills iii) Teaching materials iv) Class preparation v) Course management vi) Training Evaluation viii) Install machine & equipment ix) Manage & maintain facilities, machinery, equipment			

[32] Overall Goal: To Satisfy the Industrial needs for industrial technologies in the fields of high technology.

Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
Main Questions	Sub-Questions				
	- What are the overall instructors' capabilities to produce highly skilled industrial technologists? **(MS1.4)**	1 (Low) to 5 (High)	- JMTI management's assessment of their instructors' capabilities	- JMTI Management	- Interviews with JMTI Management
	- How many courses are you teaching now? And how many of these use skills acquired during the JICA project? **(CP 1.6; EC 1.7)**	Total number of course currently teaching; Number of course and time spent using project skills	- Project skills utilisation	- Counterpart and Ex-Counterpart	- Counterpart Survey - Ex- Counterpart Survey - Interview and Analysis
	- Give your best estimate of how much time you spend using Project equipment or skills acquired as a proportion of your total working hours? **(CP1.7; EC 1.8)**				
	- How would you compare JICA training with other training? **(CP1.4; EC1.4)**	1 = Better; 2 = Same; 3 = Worse.	- Counterpart and Ex-Counterpart assessment	- Counterpart and Ex-Counterpart	- Counterpart Survey - Ex- Counterpart Survey - Compilation and analysis
	- How is JMTI compare with other vocational training institutes which offer similar training courses **(MS1.5)**	1 = Better than other best vocational training institution; 2 = Equivalent; 3 = Worse than other best vocational training institution	- JMTI's self assessment of their capabilities	- JMTI Management	- Interviews with JMTI Management
	- What is the impact of the JICA Project on the human resource supply situation? **(MS1.6)**	1 = Very important; 2 = Important; 3 = Not so important	- JMTI's overall assessment	- JMTI Management	- Interviews with JMTI Management

Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
Main Questions	**Sub-Questions**				
	- Has JMTI's capability in producing highly skilled industrial technologists in the fields of high technology been evaluated by others (including from Ministries and industry) from 2004-2006? **(MS1.7)**	Yes/No	- Self assessment	- JMTI Management	- Interviews with JMTI Management
	Do you agree that trainees at JMTI: - have the prerequisite qualifications & are able to follow the curriculum easily? **(CP1.10; EC1.11; SV11.1)** - are interested in the courses they attend? **(CP1.11; EC1.12; SV11.2)** - are good at applying the theory to practical applications? **(CP1.12; EC1.13; SV11.3)** - have effective problem solving skills? **(CP1.13; EC1.14; SV11.4)** - have the ability to work successfully in teams? **(CP1.14; EC1.15; SV11.5)**	1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree	- Capabilities of trainees at JMTI - Counterparts, Ex-Counterparts and Senior Volunteers assessment	- Counterparts, Ex-Counterparts and Senior Volunteers	- Counterpart Survey - Ex- Counterpart Survey - Interview with Senior Volunteers - Compilation and analysis

	Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
	Main Questions	**Sub-Questions**				
		- have the ability to adapt their knowledge and skills? **(CP1.15; EC 1.16; SV11.6)** - have strong work ethics? **(CP1.16; EC1.17; SV11.7)** - met or exceeded your expectations **(CP1.17; EC1.18; SV11.8)**				
	2. What kind of factors have contributed to positive and negative impacts?	- What are the factors that have contributed to positive impacts? **(MS2.2i)** - What are the factors that have contributed to negative impacts? **(MS2.2ii)**		JMTI's self assessment	- JMTI Management	- Interview with JMTI management
	3. Besides the Overall Goal of the project, are there unexpected positive/ negative impacts observed?	What are the positive unintended effects of the Project? Particularly benefits **(MS2.1; CP2.1; EC2.1)** - What are the negative unintended effects of the Project? Particularly issues and problems **(MS2.1; CP2.2; EC2.2)**	Description and analysis of interview and survey Compare remuneration between public and private sectors	- Salary scales of instructors - Salaries of technologists - Industries participated in Job Fair - Other dedicated training programmes	- Counterparts - Ex-Counterparts - JMTI Management - Industrial firms	- Literature & Document Search - Discussion, interviews with JMTI Counterparts / ex-counterpart officers & who were trained in Japan - Interview selected industries

Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
Main Questions	Sub-Questions				
	- Has JMTI been able to offer the following services to private sectors since project completion? **(MS2.3)**	Assess how JMTI works with industry (check for renting out of machinery & equipment, consultancy, short courses, attachments)	- JMTI assessment	- JMTI Management - Industrial firms	- Interview with JMTI Management - Interview with employers
	- How many staff were trained under the Project? **(MS2.4)**	Number of staff trained	- Total no. of staff trained by Project, number of staff remaining and no longer in service as at 2007.	- JMTI Management	- Interview with JMTI Management - Compilation and analysis
4. Are there any external factors that affected the achievement of the Overall Goal?	- Are there changes in government policy that might affect/impact on Project goals? **(MS3.1)**	Description and analysis of current situation of high tech industries in Malaysia	- Government policies	- JMTI - MoHR	- Literature review - Interview with Management - Interview with industry
	- Any other changes, particularly industrial trends? **(MS3.2)**	Describe vocational training trends	- Change in industrial technology needs		

	Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
	Main Questions	**Sub-Questions**				
SUSTAINABILITY	1. How has the counterpart agency continued the Project activities and services?	- What is the demand for the courses in JMTI? **(MS4.1)**	Compare the newly obtained information with the terminal evaluation; and Determine whether JMTI can carry out programme without JICA's support	- Utilisation rate of Project skills - Utilisation rate of Project equipments - Intakes and graduates from 1998-2006 - (Annex 4B: Summary of the Equipment Used and Maintained)	- JMTI records - Counterparts - Ex-counterparts - JMTI Management	- Literature review - Interview with Counterparts & Ex-counterparts - Interviews with JMTI Management
		- Have you trained other staff using skills that were acquired during the project? **(MS4.2; CP1.8; EC1.9)**	Yes/No	- Number of training sessions - Number of staff trained	- Counterpart and Ex-Counterpart	- Counterpart Survey - Ex- Counterpart Survey - Management Survey
		- Have you conducted any training for other MoHR institutes using skills that were acquired during the project? **(CP1.9; EC1.9 & 1.10)**	Yes/No	- Number of training sessions - Number of participants	-	-
		- Are Project facilities/ equipments still in use? - Are Project facilities/ equipments adequately maintained? **(MS4.3; CP4.2; EC4.2)**	Compare new information with the terminal evaluation	- Summary of the equipment used and maintained - Utilisation rate of the Project equipment	- JMTI Records - Counterparts - Ex-counterparts - JMTI Management	- Data compilation

Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
Main Questions	Sub-Questions				
	- Does JMTI face any issue in sustaining Project outcomes? **(MS4.4)** - Do you face any issues/problems in sustaining the technology, skills and knowledge learned in the Project? **(CP3.3; EC3.3)**	Yes/No	- Issues or problems	- JMTI Management - Counterparts - Ex-counterparts	- Interviews with JMTI management - Counterpart Survey - Ex- Counterpart Survey
	- Have you upgraded or expanded your skills and knowledge which you have acquired through the Project, through formal training since Project completion? **(CP3.1; EC3.1)**	Yes/No	- Counterpart and Ex-Counterpart assessment	- Counterparts - Ex-counterparts	- Counterpart Survey - Ex- Counterpart Survey - Data compilation and analysis
	- What are the types of skills learning situations at JMTI? **(CP3.2; EC3.2; SV12)**	Knowledge sharing between colleagues; On-the-job training; Learning from other MoHR institute's instructors; Collaboration across discipline; Others	- Counterpart and Ex-Counterpart assessment	- Counterparts - Ex-counterparts	- Counterpart Survey - Ex- Counterpart Survey - Data compilation
2. Have the Project outcomes been maintained since the termination of JICA's assistance?	- Are the training courses still valid? **(MS5.1)** - How does JMTI keep up to date on skill needs of industry? **(MS5.2)**	Compare this information with terminal evaluation Describe networking between JMTI and industry	- Industry needs vs JMTI outputs - Number of skills training courses - Operating and development budget allocation - Budget for promotion and marketing	- JMTI records - Counterparts - JMTI Management	- Literature review - Interview with Counterparts - Interview with JMTI Management - Data Compilation
	- In terms of instructors, equipment and financing, what are the impediments? **(MS5.3)**	Description and analysis of interview			

	Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
	Main Questions	**Sub-Questions**				
		- Do you think that the technology transfer and skills acquired by you through the Project meets current industrial needs and demand? **(CP4.1; EC4.1; SV13)**	Yes/No	- Industrial needs vs skills acquired through the Project	- Counterparts - Ex-counterparts - Senior Volunteers	- Counterpart Survey - Ex- Counterpart Survey - Interview with Senior Volunteers - Data compilation and analysis
		- Are the project facilities and equipments relevant to your area of expertise fully utilised? **(CP4.3; EC4.3)**	Yes/No	- Type of expertise and equipment needed		
		- In your view, is JMTI investing sufficiently in skills development in your area of expertise? **(CP4.4; EC4.4)**	Yes/No	- Skills development of staff		

	Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
	Main Questions	**Sub-Questions**				
	3. What kinds of the factors contribute to or inhibit the sustainability?	- Any budget allocations for the additional training of instructors? **(MS6.1)** - Any additional instructors & equipment procured to sustain project outcomes? **(MS6.2)** - Are there any other donors/ agencies involved after project completion? **(MS6.3)** - If yes, who are the donor agencies and amount of budget etc? **(MS6.4)** - Are there any budgetary constraints? **(MS6.6i)** - Are there any technology transfer or skills issues? **(MS6.6ii & iii)** - Are there any institutional challenges? **(MS6.6iv)** - What are the changes in industrial trends **(MS6.6v)** - Are the JMTI qualifications still recognised by PSD & NVTC? **(MS6.7)**	Describe the significant changes and analyse findings	- Additional staff recruited - Staff training budget - Additional investments to procure equipment - Current projects from other donor agencies (size & contribution as a proportion of JMTI totals) - Budget requests approved and rejected (separately for development and operating) - Institutional changes - Industry needs	- JMTI records - JMTI Management	- Interview with Counterparts - Interviews with JMTI Management

	Evaluation Questions		Achievement Criteria/Measures	Data Needed	Data Sources	Data Collection Method
	Main Questions	**Sub-Questions**				
Specific Questions	1. How recommendations made in the joint final evaluation report on the Follow-up Project dated on December 23, 2003 has been implemented? Pros and cons, if any.	- Have the balance of the training equipment been installed? **(MS6.8)** - Are the instructors proficient in using the equipment? - Are the key instructors still with JMTI? **(MS6.9)**	Describe situation and changes	- Utilisation rate of training equipment - Staff information	- JMTI Management	- Interview with Counterparts - Interviews with JMTI Management
		- Have you utilised the reports produced by JICA's experts or other literature reference provided by JICA after project completion? **(CP4.5; EC4.5; SV14)**	Yes/No	- Usage of report	- Counterparts - Ex-counterparts - Senior Volunteers	- Counterpart Survey - Ex- Counterpart Survey - Interview with Senior Volunteers - Data compilation

Time Period of data requests: 2003-2006
Overall Project Purpose: To Produce highly skilled industrial technologist (L4 equivalent) in the fields of high technology in manufacturing, electronics, computer and mechatronics in the Japan-Malaysia technical Institute (JMTI).

Annex 3A: Management Survey Questionnaire

JICA-JMTI

EX-POST EVALUATION STUDY ON THE JAPAN-MALAYSIA TECHNICAL INSTITUTE PROJECT IN MALAYSIA 2007

Name of Respondent: ☐Mr./ ☐ Ms./ ☐ Mrs./ ☐Dr _____

Designation: _____

Address & Contact: _____

_____

Interviewer: _____

Date: _____ 2007

SECTION 1: IMPACT

Extent of achievement of overall Project Goal since the final evaluation

1.1. Since Project completion, has JMTI produced highly skilled industrial technologists?

	Fields	Yes	No	Details
i)	Manufacturing	1 ☐	2 ☐	
ii)	Electronics	1 ☐	2 ☐	
iii)	Computer	1 ☐	2 ☐	
iv)	Mechatronics	1 ☐	2 ☐	

1.2. Give details on the intake and graduates of JMTI with an official diploma since the final evaluation. *(I=Intake, G=Graduates)*

Fields	Manufacturing		Electronics		Computer		Mechatronics		Total	
	I	G	I	G	I	G	I	G	I	G
1998			***26***	***15***	***32***	***23***			***58***	***38***
1999	***13***	***13***	***29***	***24***	***41***	***28***	***11***	***10***	***94***	***75***
2000	***22***	***21***	***45***	***28***	***48***	***47***	***27***	***19***	***142***	***115***
2001	***36***		***37***		***53***		***39***		***165***	
2002	***56***		***56***		***53***		***56***		***221***	
2003	***53***		***55***		***60***		***55***		***223***	
2004										
2005										
2006										

1.3. What is the level of JMTI to train highly skilled industrial technologist (L4 or equivalent) since project completion?

	Fields	Lower than Project Completion	Same as Project Completion	Improve
i)	Manufacturing	1 ☐	2 ☐	3 ☐
ii)	Electronics	1 ☐	2 ☐	3 ☐
iii)	Computer	1 ☐	2 ☐	3 ☐
iv)	Mechatronics	1 ☐	2 ☐	3 ☐
	Overall	1 ☐	2 ☐	3 ☐

1.4. Rank **overall** instructors' capabilities to produce highly skilled industrial technologists.

		Project Completion (2003)					**Post-Project (2007)**				
		Low				**High**	**Low**				**High**
i)	Curriculum development	1 □	2 □	3 □	4 □	5 □	1 □	2 □	3 □	4 □	5 □
ii)	Professional skills	1 □	2 □	3 □	4 □	5 □	1 □	2 □	3 □	4 □	5 □
iii)	Teaching materials	1 □	2 □	3 □	4 □	5 □	1 □	2 □	3 □	4 □	5 □
iv)	Teaching methods	1 □	2 □	3 □	4 □	5 □	1 □	2 □	3 □	4 □	5 □
v)	Class preparation	1 □	2 □	3 □	4 □	5 □	1 □	2 □	3 □	4 □	5 □
vi)	Course management	1 □	2 □	3 □	4 □	5 □	1 □	2 □	3 □	4 □	5 □
vii)	Training evaluation	1 □	2 □	3 □	4 □	5 □	1 □	2 □	3 □	4 □	5 □

1.5. Compare JMTI with other vocational training institutes which are offering similar training course.

(1 = Better than other best vocational training institution; 2 = Equivalent;
3 = Worse than other best vocational training institution)

Fields	**Technology**			**Facilities**			**Instructors**			**Courses**		
i) Manufacturing	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □
ii) Electronics	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □
iii) Computer	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □
iv) Mechatronics	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □
Overall	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □	1 □	2 □	3 □

1.6. What is JMTI's overall assessment of the impact of the JICA Project in producing highly skilled industrial technologists in manufacturing, electronics, computer and mechatronics on the human resource supply situation?

		Comments
1 □	Very important	
2 □	Important	
3 □	Not so important	

1.7. Has JMTI's capability in producing highly skilled industrial technologists in the fields of high technology been evaluated by others (including from Ministries and industry) from 2004-2006?

1 □ Yes 2 □ No

If Yes, please list down the types, agencies and number of evaluations conducted.
___ times

Evaluations Conducted	**Agencies**

Positive and Negative Impacts

2.1. What are the unintended positive/negative impacts of the Project?

	Issue	Positive (Benefits)	Negative (Issues & Problems)
i)	Industrial Policy		
ii)	Technology		
iii)	Social Aspects		
iv)	Economic/Financial benefits		
v)	Institutional management		
vi)	Others		

2.2. What factors have contributed to positive and negative impacts?

		Factors
i)	Positive Impacts	
ii)	Negative Impacts	

2.3. Has JMTI been able to offer the following services to private sectors since project completion?

	Type of Services	Description
1 □	Renting equipment and machinery to industries/private sector	
2 □	Individual consultancy services	
3 □	Short-term training courses to industries/ private sector	
4 □	Attachments (industry training, etc)	
5 □	Others, please specify.	

2.4. Basic information about JMTI staff trained under JICA project. (*please provide names in separate list – template attached*)

	Fields	No. of Staff Trained by Project	No. of Staff Remaining 2007	No. of Staff no longer in service
i)	Manufacturing			
ii)	Electronics			
iii)	Computer			
iv)	Mechatronics			
v)	Management			
	Total			

External Factors Affected the Achievements of the Overall Goal

3.1. Any changes in government policy that have affected/impacted JMTI's capability in producing highly skilled industrial technologists?

1 □ Yes 2 □ No

If yes, please describe the changes.

3.2. Is JMTI aware of any changes, particularly the industrial needs for industrial technologies in the field of high technology?

1 □ Yes 2 □ No

If yes, please describe the changes and how JMTI has kept abreast of the changes.

SECTION 2: SUSTAINABILITY

Continued the Project Activities

4.1. What is the demand for the courses in JMTI since Project completion?

1 □ High 2 □ Same 3 □ Low

Comments:

4.2. Are the skills learned during the Project widely shared with other/new staff of JMTI? (and with other MoHR institutes?)

		Other / new staff of JMTI		Other MoHR Institutes		Please Explain
		Yes	No	Yes	No	
i)	Curriculum development	1 □	2 □	1 □	2 □	
ii)	Professional skills	1 □	2 □	1 □	2 □	
iii)	Teaching materials	1 □	2 □	1 □	2 □	
iv)	Teaching methods	1 □	2 □	1 □	2 □	
v)	Class preparation	1 □	2 □	1 □	2 □	
vi)	Course management	1 □	2 □	1 □	2 □	
vii)	Training evaluation	1 □	2 □	1 □	2 □	

4.3. Are Project facilities and equipments provided adequately maintained? *(Refer to the checklist of items listed in the final evaluation report)*

		Yes	No	Reasons
i)	Manufacturing	1 □	2 □	
ii)	Electronics	1 □	2 □	
iii)	Computer	1 □	2 □	
iv)	Mechatronics	1 □	2 □	

4.4. Does JMTI face any issue in sustaining Project outcomes?

1 ☐ Yes 2 ☐ No

If yes, please describe the issues.

Maintaining the Project's Outcomes

5.1. Are the training courses still valid since Project completion?

1 ☐ Yes 2 ☐ No

If no, please explain the reason.

5.2. How does JMTI keep up to date on skill needs of industry?

5.3. In terms of instructors, equipment and funding, what are the impediments faced by JMTI to maintain Project outcomes?

Areas	Impediments
Instructors	
Equipment/Facility	
Funding	
Others	

Factors Contributing to the Sustainability of Project Outcomes

6.1. Any budget allocations for the additional training of instructors?

Year	Yes	No	Budget allocations for additional training (RM)	Number of instructors trained
2004	1 ☐	2 ☐		
2005	1 ☐	2 ☐		
2006	1 ☐	2 ☐		

6.2. Are there any additional instructors and equipment procured to sustain project outcomes?

Year	Additional asset value of Equipment (RM)	Additional annual operating and maintenance expenditure (RM)	Additional Instructors
2004			
2005			
2006			

6.3. Are there any other donors/agencies involved in this Japan-Malaysia Technical Institute Project since Project completion?

1 □ Yes 2 □ No

6.4. If yes, please indicate the name of donors/agencies, areas of cooperation, period of involvement and financial allocations?

Name of Donors / Agencies	Areas of Cooperation	Period of Involvement	Financial Allocation

6.5. Have the above mentioned co-operation projects and services contributed to JMTI financial status?

1 □ Yes 2 □ No

Reasons: _____

6.6. Are there any issues with regards to the following areas that inhibit the sustainability of Project outcomes?

		Yes	No	Reasons
i)	Budget constraint	1 □	2 □	
ii)	Technology transfer	1 □	2 □	
iii)	Skills requirement	1 □	2 □	
iv)	Institutional challenges	1 □	2 □	
v)	Industrial trend changes	1 □	2 □	
vi)	Others	1 □	2 □	

6.7. Are the JMTI qualifications still recognised by PSD and NVTC?

		Yes	No	Reasons
i)	Public Service Department (PSD)	1 □	2 □	
ii)	National Vocational Training Council (NVTC)	1 □	2 □	

6.8. Have the balance of the training equipment (delayed during project period, 1998-2003) been installed during the follow up period (2003-2004)?

1 □ Yes 2 □ No

6.9. Are the key instructors still with JMTI?

1 □ Yes 2 □ No

Thank you!

Annex 3B: Counterpart Survey Questionnaire

JICA EX-POST EVALUATION STUDY ON THE JAPAN-MALAYSIA TECHNICAL INSTITUTE PROJECT IN MALAYSIA 2007

JICA Malaysia Office has appointed **PE Research Sdn Bhd** to conduct an Ex-Post Evaluation Study on the Japanese Technical Cooperation. The Malaysian Implementing Agency was Japan-Malaysia Technical Institute (JMTI).

This project was aimed at producing highly skilled industrial technologist (L4 or equivalent) in the fields of high technology in manufacturing, electronics, computer and mechatronics in the Japan-Malaysia Technical Institute (JMTI). This project was successfully completed in 2003.

This evaluation study is expected to verify the important issues relating to the project impact and sustainability observed after three (3) years from the completion of the project. The results of the Study contribute to the better-informed decision making based on the lessons learned, and the promotion of the greater accountability. This study focuses on the main evaluation of **Impact** and **Sustainability** of the Project.

(Attach name card if any)

Name of Respondent: ☐Mr./ ☐ Ms./ ☐ Mrs./ ☐Dr _____

Designation: _____

Age / Sex: _____ years 1 ☐ Male 2 ☐ Female

Highest Professional Qualification Obtained: _____

Career Development in JMTI _____

What is your area of expertise/specialisation? _____

Interviewer: _____

Date: _____ 2007

Kindly indicate the fields that you have been trained in the Project and outside the Project.

		Trained in Japan	Trained internally in JMTI	Other Training outside the Project
i)	Curriculum development	1 ☐	2 ☐	3 ☐
ii)	Professional skills	1 ☐	2 ☐	3 ☐
iii)	Teaching materials	1 ☐	2 ☐	3 ☐
iv)	Teaching methods	1 ☐	2 ☐	3 ☐
v)	Class preparation	1 ☐	2 ☐	3 ☐
vi)	Course management	1 ☐	2 ☐	3 ☐
vii)	Training evaluation	1 ☐	2 ☐	3 ☐
viii)	Install machinery and equipment	1 ☐	2 ☐	3 ☐
ix)	Manage and maintain facilities, machinery, equipment	1 ☐	2 ☐	3 ☐

SECTION 1: IMPACT

1. **Project Contribution**

1.1. To what extent did the Project raise the overall level of JMTI's capability in producing highly skilled industrial technologist (L4) in the field of high technology in manufacturing, electronics, computer and mechatronics?

	No Comment	Low				High
JMTI's capability	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

1.2. To what extent has this Project succeeded in enhancing your capability in providing such services in Malaysia?

		Not Relevant	Low				High
i)	Curriculum development	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
ii)	Professional skills	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
iii)	Teaching materials	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
iv)	Teaching methods	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
v)	Class preparation	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
vi)	Course management	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
vii)	Training evaluation	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
viii)	Install machinery and equipment	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
ix)	Manage and maintain facilities, machinery, equipment	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Please elaborate: _____

_____

1.3. What in your view was particularly distinctive about JICA Project and the training that you received?

_____

_____

1.4. How would you compare the JICA training with other training that you had undertaken in JMTI?

1 ☐ Better 2 ☐ Same 3 ☐ Worse

Please explain: _____

_____

1.5. In your view, were there any areas that would have enhanced the impact of the project even more than it has?

_____

_____

1.6. How many courses are you teaching now? And how many of these use skills acquired during the JICA project?

Total Number of Course you are Teaching	
Number of Courses using Project Skills	

1.7. Give your best estimate of how much time you spend using Project equipment or skills acquired as a proportion of your total working hours?

_____ % of times

1.8. Have you trained other JMTI staff using skills that were acquired during the project?

1 ☐ Yes 2 ☐ No

(If yes, please provide details, best estimate for training between 2003 and 2006.)

Total no. of training sessions: _____ Total no. of JMTI staff trained: _____

1.9. Have you conducted any training for other MoHR institutes using the skills that were acquired during the Project?

1 ☐ Yes 2 ☐ No

(If yes, please provide details, best estimate for training between 2003 and 2006.)

Total no. of training sessions: _____ Total no. of participants: _____

	We would like to get your views about the capabilities of the trainees at JMTI. Please indicate whether you agree or disagree with the following statements.	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**
1.10.	Overall, trainees at JMTI have the prerequisite qualifications and were able to follow the curriculum easily.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.11.	Trainees at JMTI are interested in the courses they attend.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.12.	Trainees at JMTI are good at applying the theory to practical applications.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.13.	Trainees at JMTI have effective problem solving skills.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.14.	Trainees at JMTI have the ability to work successfully in teams.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.15.	Trainees at JMTI have the ability to adapt their knowledge and skills.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.16.	Trainees at JMTI have strong work ethics (i.e. hard working, dependable, cooperative and honest).	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.17.	The trainees at JMTI met or exceeded my expectations.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

2. **Unintended Impacts from the Project**

2.1. Any unintended benefits from the Project for you? (e.g. training accepted as waiver for a professional qualification, career improved, awards, etc)

2.2. Any unintended problems and issues of the Project that arose for you? (e.g. missed promotion, career stagnated, etc.)

SECTION 2: SUSTAINABILITY

3. **Maintaining Project Benefits**

3.1. Have you upgraded or expanded your skills and knowledge which you have acquired through the Project, through formal training since Project completion?

1 ☐ Yes 2 ☐ No

If yes, please provide details, e.g. type of course attended, place, year and duration.

_____

3.2. Do these types of skill learning situations exist at JMTI? (Please tick all applicable)

☐ Knowledge sharing between colleague
☐ Collaboration across discipline, e.g. other departments
☐ On-the-job training
☐ Others. Please specify.
☐ Learning from other MoHR institute's instructors

3.3. Do you face any issues/problems in sustaining the technology, skills and knowledge learned in the Project?

1 ☐ Yes 2 ☐ No

If yes, please describe the issues: _____

4. **Maintaining Project Outcomes**

4.1. Do you think that the technology transfer and skills acquired by you through the Project meets current industrial needs and demand?

1 ☐ Yes 2 ☐ No

Please explain. _____

4.2. Has your work been interrupted or stopped because Project facilities and equipment were not adequately maintained or repairs were lacking?

1 ☐ Yes 2 ☐ No

Please explain. _____

4.3. Are the Project facilities and equipments relevant to your area of expertise fully utilised?

1 ☐ Yes 2 ☐ No

Please explain. _____

4.4. In your view, is JMTI investing sufficiently in skill development in you area of expertise?

1 ☐ Yes 2 ☐ No

Please explain. _____

4.5. Have you utilised the reports produced by JICA's experts or other literature reference provided by JICA after project completion?

1 ☐ Yes 2 ☐ No

Reason(s). _____

Annex 3C: Ex-Counterpart Survey Questionnaire

JICA EX-POST EVALUATION STUDY ON THE JAPAN-MALAYSIA TECHNICAL INSTITUTE PROJECT IN MALAYSIA 2007

JICA Malaysia Office has appointed **PE Research Sdn Bhd** to conduct an Ex-Post Evaluation Study on the Japanese Technical Cooperation. The Malaysian Implementing Agency was Japan-Malaysia Technical Institute (JMTI).

This project was aimed at producing highly skilled industrial technologist (L4 or equivalent) in the fields of high technology in manufacturing, electronics, computer and mechatronics in the Japan-Malaysia Technical Institute (JMTI). This project commenced from 1998 to 2003 and then followed by the extension of another one year.

This evaluation study is expected to verify the important issues relating to the project impact and sustainability observed after three (3) years from the completion of the project. The results of the Study contribute to the better-informed decision making based on the lessons learned, and the promotion of the greater accountability. This study focuses on the main evaluation of **Impact** and **Sustainability** of the Project.

Name of Respondent: □Mr./ □ Ms./ □ Mrs./ □Dr _____

Designation: _____

Current Organisation: _____

Age / Sex: _____ years 1 □ Male 2 □ Female

Highest Professional Qualification Obtained: _____

Career Development after leaving JMTI: _____

What is your area of expertise/specialisation? _____

	Kindly indicate the fields that you have been trained in the Project (when you were still with JMTI) and outside the Project.			
		Trained in Japan	**Trained internally in JMTI**	**Other Training outside the Project**
i)	Curriculum development	1 □	2 □	3 □
ii)	Professional skills	1 □	2 □	3 □
iii)	Teaching materials	1 □	2 □	3 □
iv)	Teaching methods	1 □	2 □	3 □
v)	Class preparation	1 □	2 □	3 □
vi)	Course management	1 □	2 □	3 □
vii)	Training evaluation	1 □	2 □	3 □
viii)	Install machinery and equipment	1 □	2 □	3 □
ix)	Manage and maintain facilities, machinery, equipment	1 □	2 □	3 □

a) Please indicate the period you had been with JMTI. _____ months _____ years

b) When did you leave JMTI? (MM/YY) _____

c) Why did you leave JMTI?

1 ☐ Better Offer
2 ☐ Promotion
3 ☐ Personal matter
4 ☐ Others, please specify: _____

d) Please indicate the subject and period of training during the JICA-JMTI Project (1998-2004)?

	Subject of Training	Period of Training (Month, year)
i)		
ii)		
iii)		
iv)		

e) How would you rate the usefulness of the training during the Project to your current job?

1 ☐ Very useful (Utilise more than 80%)
2 ☐ Some degree (Utilise more than 50%)
3 ☐ A little (Utilise less than 50%)
4 ☐ Not applicable.

Please elaborate. _____

SECTION 1: IMPACT

1. **Project Contribution**

1.1. To what extent did the Project raise the overall level of JMTI's capability in producing highly skilled industrial technologist (L4) in the field of high technology in manufacturing, electronics, computer and mechatronics?

	No Comment	Low				High
JMTI's capability	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

1.2. To what extent has this Project succeeded in enhancing your capability in providing such services in Malaysia?

		Not Relevant	Low				High
i)	Curriculum development	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
ii)	Professional skills	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
iii)	Teaching materials	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
iv)	Teaching methods	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
v)	Class preparation	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
vi)	Course management	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
vii)	Training evaluation	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
viii)	Install machinery and equipment	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
ix)	Manage and maintain facilities, machinery, equipment	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Please elaborate: _____

_____

1.3. What in your view was particularly distinctive about JICA Project and the training that you received?

_____

_____

1.4. How would you compare the JICA training with other training that you have undertaken in your current institute and when you were with JMTI?

	Better	Same	Worse	Please explain:
i Current Institute	1 □	2 □	3 □	
ii JMTI	1 □	2 □	3 □	

1.5. In your view, were there any areas that would have enhanced the impact of the project even more than it has?

_____

_____

1.6. Are you currently still teaching?

1 □ Yes 2 □ No *Go to Question 1.9*

1.7. How many courses are you teaching currently and how many when you were with JMTI? And how many of these use skills acquired during the JICA project?

	Teaching currently	JMTI
Total Number of Courses		
Number of Courses using Project Skills		

1.8. Give your best estimate of how much time you spend using Project equipment or skills acquired as a proportion of your total working hours?

	Current Job	JMTI
% of times		

1.9. Have you trained other <u>JMTI staff</u> and other staff at your current institute using skills that were acquired during the project?

	Yes	No	Total no. of training sessions	Total no. of staff trained
JMTI staff	1 □	2 □		
Staff at current institute	1 □	2 □		

(If yes, please provide details, best estimate for training between 2003 and 2006.)

1.10. Have you conducted any training for <u>other MoHR institutes</u> using the skills that were acquired during the Project?

1 □ Yes 2 □ No

(If yes, please provide details, best estimate for training between 2003 and 2006.)

Total no. of training sessions: _____ Total no. of participants: _____

	We would like to get your views about the capabilities of the <u>trainees</u> at JMTI. Please indicate whether you agree or disagree with the following statements.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.11.	Overall, trainees at JMTI have the prerequisite qualifications and were able to follow the curriculum easily.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.12.	Trainees at JMTI are interested in the courses they attend.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.13.	Trainees at JMTI are good at applying the theory to practical applications.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.14.	Trainees at JMTI have effective problem solving skills.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.15.	Trainees at JMTI have the ability to work successfully in teams.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.16.	Trainees at JMTI have the ability to adapt their knowledge and skills.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.17.	Trainees at JMTI have strong work ethics (i.e. hard working, dependable, cooperative and honest).	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
1.18.	The trainees at JMTI met or exceeded my expectations.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

2. **Unintended Impacts from the Project**

2.1. Any unintended benefits from the Project for you? (e.g. training accepted as waiver for a professional qualification, career improved, awards, etc)

2.2. Any unintended problems and issues of the Project that arose for you? (e.g. missed promotion, career stagnated, etc.)

SECTION 2: SUSTAINABILITY

3. **Maintaining Project Benefits**

3.1. Have you upgraded or expanded your skills and knowledge which you have acquired through the Project, through formal training since Project completion?

1 ☐ Yes 2 ☐ No

If yes, please provide details, e.g. type of course attended, place, year and duration.

3.2. Do these types of skill learning situations exist at JMTI and at your current institute? (Please tick all applicable)

	Current Institute	JMTI
Knowledge sharing between colleague	1 ☐	2 ☐
On-the-job training	1 ☐	2 ☐
Learning from other MoHR institute's instructors	1 ☐	2 ☐
Collaboration across disciplines, e.g. other departments	1 ☐	2 ☐
Others. Please specify:	1 ☐	2 ☐

3.3. Do you face any issues/problems in sustaining the technology, skills and knowledge learned in the Project?

1 ☐ Yes 2 ☐ No

If yes, please describe the issues: _____

_____

4. **Maintaining Project Outcomes**

4.1. Do you think that the technology transfer and skills acquired by you through the Project meets current industrial needs and demand?

1 ☐ Yes 2 ☐ No

Please explain. _____

_____

4.2. Had your work been interrupted or stopped because Project facilities and equipment were not adequately maintained or repairs were lacking when you were with JMTI?

1 ☐ Yes 2 ☐ No

Please explain. _____

_____

4.3. In your view, is JMTI investing sufficiently in skill development in you area of expertise?

1 ☐ Yes 2 ☐ No

Please explain. _____

_____

4.4. Have you utilised the reports produced by JICA's experts or other literature reference provided by JICA after project completion?

1 ☐ Yes 2 ☐ No

Reason(s). _____

_____

Thank you!

Annex 3D: Employer Survey Questionnaire

JICA EX-POST EVALUATION STUDY ON THE
JAPAN-MALAYSIA TECHNICAL INSTITUTE PROJECT IN MALAYSIA 2007

JICA Malaysia Office has appointed **PE Research Sdn Bhd** to conduct an Ex-Post Evaluation Study on the Japanese Technical Cooperation. The Malaysian Implementing Agency was Japan-Malaysia Technical Institute (JMTI).

This project was aimed at producing highly skilled industrial technologist (L4 or equivalent) in the fields of high technology in manufacturing, electronics, computer and mechatronics in the Japan-Malaysia Technical Institute (JMTI). This project commenced from 1998 to 2003 and then followed by the extension of another one year.

This evaluation study is expected to verify the important issues relating to the project impact and sustainability observed after three (3) years from the completion of the project. The results of the Study contribute to the better-informed decision making based on the lessons learned, and the promotion of the greater accountability.

According to information provided to us, we understand that your company has employed JMTI graduates/sent workers for short courses at JMTI. We would like to find out whether the skills of the JMTI graduates meet you firm's expectations/how you rate the training provided by JMTI. Your participation in the survey is crucial to the success of the study.

It should take no more than 15 minutes to complete this survey. Your responses will be kept in strictest confidence. Individual responses will not be shared with the Government or the Institutes.

Name of Respondent: □Mr./ □ Ms./ □ Mrs./ □Dr _____

Designation: _____

Name of Company: _____

Address: _____

_____

_____

Tel: _____

Fax: _____

Email: _____

Date: _____ 2007

Section 1: Company Information

1. What is the main business of your firm?

		Please Explain
1 ☐	Manufacturing	
2 ☐	ICT	
3 ☐	Others, please specify.	

2. What is your company's current ownership status?

1 ☐ 100% Local
2 ☐ More than 50% Local
3 ☐ More than 50% Foreign
4 ☐ 100% Foreign
5 ☐ Others, please specify: _____

3. How many JMTI employees does your company employ? _____

Section 2: Evaluation on the Training Provided by JMTI

First, we would like to get your opinions about the capabilities of the individuals that received training from JMTI. Please indicate whether you agree or disagree with the following statements.

	Statements	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
4.	Overall, individuals that received training provided by JMTI were prepared for their jobs at this company.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5.	Individuals that received training provided by JMTI have sufficient **technical skills** to perform their jobs.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
6.	Individuals that received training provided by JMTI have effective **problem solving skills**.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
7.	Individuals that received training provided by JMTI have the ability to work successfully in teams.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
8.	Individuals that received training provided by JMTI have the ability to adapt their knowledge and skills to different working environments.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
9.	Individuals that received training provided by JMTI have strong work ethics (i.e. hard working, dependable, cooperative and honest).	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

10. Please rate your overall satisfaction with the training at JMTI.

1 □	Very Dissatisfied	4 □	Satisfied
2 □	Dissatisfied	5 □	Very Satisfied
3 □	Neither Satisfied Nor Dissatisfied		

11. Would you recommend JMTI training/graduates to other employers?

1 □ Yes 2 □ No

12. What would you suggest should be done to improve the training programme?

_____

_____

_____

13. Are you aware of other training institutions in Malaysia that provide training programmes similar to those offered by JMTI?

1 □ Yes 2 □ No

If YES, please list down names of institutions.

_____

_____

14. In your opinion, is the quality of the training programme offered by JMTI better, the same, or inferior to those offered by other training institutions in Malaysia?

1 □ Quality of training programme at JMTI is better

2 □ Quality of training programme at JMTI is the same

3 □ Quality of training programme at JMTI is inferior

15. How many of your current employees have attended training programmes at JMTI?

_____

16. Would you hire more graduates from JMTI?

1 □ Yes 2 □ No

Reasons: _____

_____

Thank you!

Annex 3E: Interview Guide - JICA Senior Volunteers

EX-POST EVALUATION STUDY ON THE
JAPAN-MALAYSIA TECHNICAL INSTITUTE PROJECT IN MALAYSIA 2007
QUESTIONNAIRE FOR JICA SENIOR VOLUNTEERS

Name of Respondent: □Mr./ □ Ms./ □ Mrs./ □Dr _____

Designation: _____

Tel & E-mail address: _____

Academic Qualification: _____

Interviewer: _____

Date: _____ 2007

1. Is this your first assignment as Senior Volunteer to a Malaysian Vocational Training institution?

   1 □ Yes 2 □ No

   If No, please elaborate where else you have been assigned.

   _____

   _____

2. Kindly explain the assignment project that is under your responsibility in this Institute?

   _____

3. Is this assignment related to other JICA technical cooperation project?

   1 □ Yes 2 □ No

4. Please describe your areas of your expertise.

   _____

   _____

5. Are you currently teaching?

   1 □ Yes 2 □ No

   If yes, please name the THREE (3) main courses that you are currently teaching.

   a) _____

   b) _____

   c) _____

6. Please indicate your general work programme.

Lecture Classes (theory)		%
Practical Classes (workshops etc)		%
Training other local lecturers/trainers		%
Administrative work		%
Others		%
TOTAL	**100**	**%**

7. To what extent has this Project succeeded in enhancing your capability in providing such services in Malaysia?

		Not Relevant	Low				High
i)	Facility and Equipment	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
ii)	Local counterparts	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
iii)	Technology Level	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
iv)	Demand from Industry	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
v)	Institutional Support	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
vi)	Development of HR	☐	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Please elaborate: _____

_____

8. How relevant has your assignment been to this Institute?

_____

_____

9. What are the main obstacles/impediments that you perceive to the successful implementation of vocational training in this Institute?

Internal	
External	

10. What is your perception (view) on the following parameters of the Institute in providing technical and vocational training for industrial human resources development?

Parameters	**Perception (View)**
Institutional capability and capacity (organisation and structure)	
Infrastructure capability and capacity (facility and equipment)	
Human Resource capability and capacity (lecturers, technical staff)	
Meeting Industrial Needs capability and capacity (training curriculum, demand and supply)	
Financial capability and capacity (e.g. sustainable or require government support or donor support etc)	

11.	**We would like to get your views about the capabilities of the trainees at JMTI. Please indicate whether you agree or disagree with the following statements.**	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**
11.1.	Overall, trainees at JMTI have the prerequisite qualifications and were able to follow the curriculum easily.	1 □	2 □	3 □	4 □	5 □
11.2.	Trainees at JMTI are interested in the courses they attend.	1 □	2 □	3 □	4 □	5 □
11.3.	Trainees at JMTI are good at applying the theory to practical applications.	1 □	2 □	3 □	4 □	5 □
11.4.	Trainees at JMTI have effective problem solving skills.	1 □	2 □	3 □	4 □	5 □
11.5.	Trainees at JMTI have the ability to work successfully in teams.	1 □	2 □	3 □	4 □	5 □
11.6.	Trainees at JMTI have the ability to adapt their knowledge and skills.	1 □	2 □	3 □	4 □	5 □
11.7.	Trainees at JMTI have strong work ethics (i.e. hard working, dependable, cooperative and honest).	1 □	2 □	3 □	4 □	5 □
11.8.	The trainees at JMTI met or exceeded my expectations.	1 □	2 □	3 □	4 □	5 □

12. Do the following types of skill learning situations exist at JMTI? (Please tick all applicable)

1 □ Knowledge sharing between colleague

2 □ On-the-job training

3 □ Learning from other MoHR institute's instructors

4 □ Collaboration across discipline, e.g. other departments

5 □ Others. Please specify. _____

13. Do you think that the technology transfer and skills acquired through the Project by the counterparts meet current industrial needs and demand?

1 □ Yes 2 □ No

Please explain. _____

14. Have you utilised the reports produced by JICA's experts or other literature reference provided by JICA after project completion?

1 □ Yes 2 □ No

Reason(s). _____

Thank You.

Annex 4A: Equipment Checklist

List of Equipment provided by Japan (Computer Department)

					Please mark x for the relevant fields								
NO.	Pic	ITEM	DESCRIPTION	QUANTITY	Still in use	Require repair (not in use)	Maintenance done in 2004	Maintenance done in 2005	Maintenance done in 2006	Estimated cost of repair (RM)	Reason for breakdown	Average hours used per week	Remarks/ Comments
1	C1	Laser Printer	Canon LBP-810	1	X							20	
2	C2	Laser Printer	HP LASERJET 5000	1							Can't be repaired		
3	C3	Scanner	HP 6300C	1	X							20	
4	C4	Digital Video Camera	Sharp	1	X							0	Language - Japanese
5	C5	Firewall	Watchguard Firebox II	1	X							3	
6	C6	Hub	D-LINK	2	X							9	
7	C7	Hub 16 Port	EDIMAX	2	X							3	
8	C8	Scanner	HP SCANJET 6100C	1							Can't be repaired		Not working
9	C9	Scanner	Genius Color Page VividPro-2	1							Can't be repaired		
10	C10	CPU		13	X							9	
11	C11	Student Tables		25	X							40	
12	C12	Magnetic Whiteboard 3X2		1	X							40	
13	C13	Portable Screen		1							Stand spoiled		
14	C14	Computer Table		1	X							40	
15	C15	Equipment Rack	19U	1	X							9	

List of Equipment provided by Japan (Electronics Department)

					Please mark x for the relevant fields								
NO.	Pic	ITEM	DESCRIPTION	QUANTITY	Still in use	Require repair (not in use)	Maintenance done in 2004	Maintenance done in 2005	Maintenance done in 2006	Estimated cost of repair (RM)	Reason for breakdown	Average hours used per week	Remarks/ Comments
1	E1	Measuring Station	WE400	11	X		X			5,000	Bad switching power supply	12	repairing cost very high
2	E2	Digital Multimeter	Yokogawa 7555	3	X							12	
3	E3	Digital Power Meter	Yokogawa	1	X							3	
4	E4	Handheld Multimeter	Yokogawa 730 01	1	X							3	
5	E5	Handy calibrator	Yokogawa CA11	1	X							12	
6	E6	Graphics equalizer	Marantz EQ-580	2								0	
7	E7	Handy oscilloscope recorder	Yokogawa OR-100E	1	X							12	
8	E8	Computer	IBM 300GL	21			X	X		3,000		0	outdated h/ware and s/ware, the computer room is closed down
9	E9	Programmable audio processor	Technics SH-D1000	1								0	
10	E10	Laser Printer (B/W)	HP 4000N	3	X							20	
11	E11	Server	Netfinity 5000	1								0	expected to use with new pc (by mid of May 07)
12	E12	ISA optical interface card	Yokogawa	21								0	with 8 computer, data bus outdated
13	E13	GPIB interface card	NI	9	X							12	
14	E14	Microsoft office 97'	software	21								0	outdated
15	E15	Windows NT work station	software	21								0	
16	E16	Kedit for WINDOWS	software	21								0	
17	E17	LabVIEW Ver 5.0	software	7								0	outdated

List of Equipment provided by Japan (Manufacturing Department)

					Please mark x for the relevant fields								
NO.	Pic	ITEM	DESCRIPTION	QUANTITY	Still in use	Require repair (not in use)	Maintenance done in 2004	Maintenance done in 2005	Maintenance done in 2006	Estimated cost of repair (RM)	Reason for breakdown	Average hours used per week	Remarks/ Comments
1	MFG1	CNC Turning Center	HITACHI CA23	1	X			X		10,900	Tool registration problem	18	Full system maintenance, configure and calibrate in Disember 2005 cost RM99,500
2	MFG2	CNC Grinding Center	HITACHI SEIKI VKC 45	1	X			X		18,000	Spindle encorder and coalant pump problem	18	
3	MFG3	Mount Robot	HITACHI MR10	1	X			X		50,000	Axis servo controller problem	18	
4	MFG4	Fanuc Robot	FANUC M6i	1	X							18	
5	MFG5	Automatic Warehouse	HAITECH SEIKO	1	X							18	
6	MFG6	Automatic Guided Vehicle	SHINKO - RAKUDA 100	1	X							18	
7	MFG7	Main Control		1	X							18	
8	MFG8	Computer		2	X							18	
9	MFG9	Plus LCD Projector	Projector	1	X							10	
10	MFG10	Laptop Acer DX5600	Laptop	1							Can't be used any more		Casing broken, unfound
11	MFG11	Computer		1							not use any more		OS - Japanese
12	MFG12	Laser Color Printer	FujiXerox DocuPrint C831	1	X							2	

List of Equipment provided by Japan (Mechatronics Department)

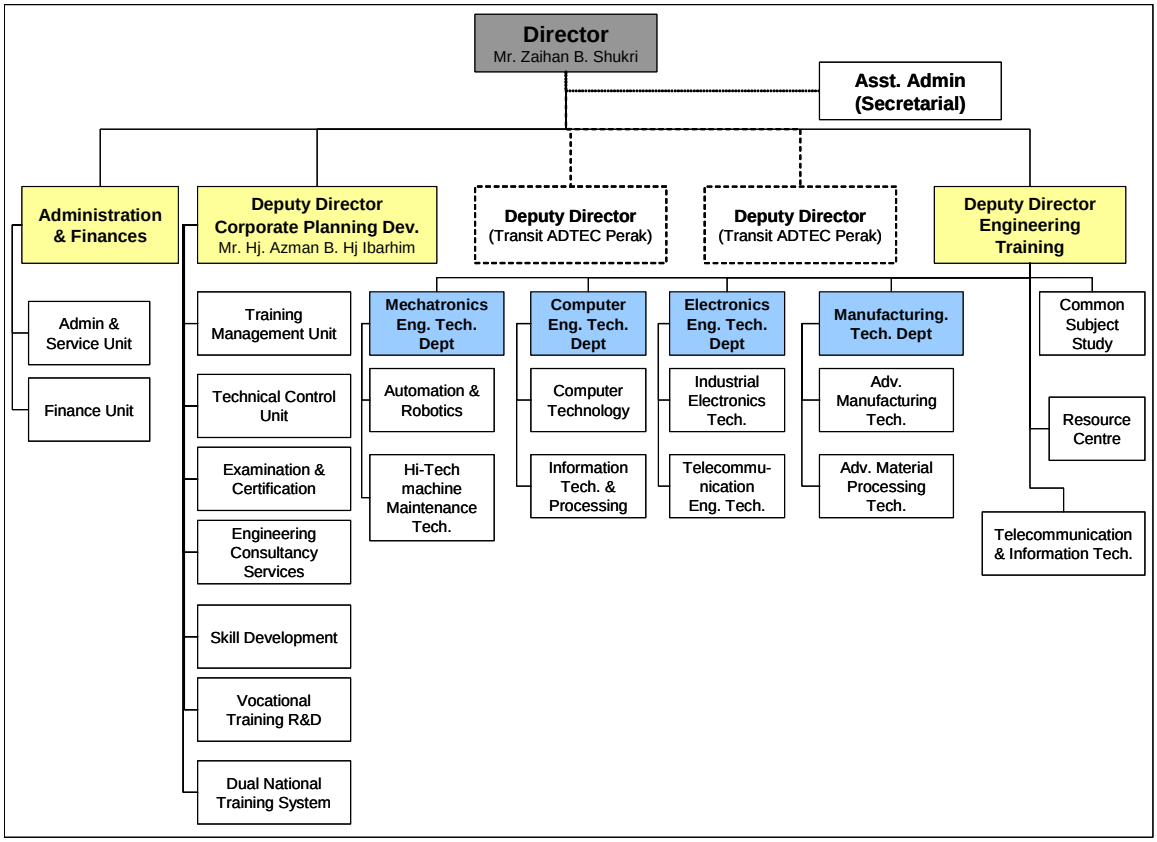
NO.	Pic	ITEM	DESCRIPTION	QUANTITY	Please mark x for the relevant fields: Still in use	Require repair (not in use)	Maintenance done in 2004	Maintenance done in 2005	Maintenance done in 2006	Estimated cost of repair (RM)	Reason for breakdown	Average hours used per week	Remarks/ Comments
1	MEC1	PLC Training Kit	CPM1A	1	X							Students project	Programmable Logic Controller
2	MEC2	PLC Training Kit	CPM1A	2	X							Students project	
3	MEC3	PLC Training Kit	CPM1A	8	X							Students project	
4	MEC4	Electric Hand Drill	Bosch GBH2-24	1	X							Continuously	
5	MEC5	Diagnosis System	Kawatetsu MW-5251-1	2	X							10	
6	MEC6	Movement Diagnosis System	Kawatetsu MK-500	2	X							10	
7	MEC7	Laser Printer	Canon LBP-800	1	X							Continuously	
8	MEC8	Printer	HP Deskjet 720C	2	X							Continuously	use only to print out data
9	MEC9	Air Compressor	Dancomair P5-DC125	1	X							Continuously	
10	MEC10	Fanuc M6i with Rail	Fanuc	1	X			X		Lump-Sum RM 53,120 (actual cost) with the system	Preventive Maintenance (Servicing, Re-aligning, Greasing, Back-up battery, Software & Programming Flushing, Parts wear & tear). Breakdown Maintenance (Servo Motor)	20	
11	MEC11	Fanuc M6i	Fanuc	1	X			X				20	
12	MEC12	Industrial Robot	Mitsubishi RV-E2	1	X			X				20	servo pack broken, however, maintenance had been carried out internally at April 2007
13	MEC13	Industrial Robot	Mitsubishi RH-E3H	1	X			X				20	
14	MEC14	Industrial Robot	Mitsubishi RV-E3J	1	X			X				20	

Annex 4B: Summary of the Equipment Used and Maintained

Department	Details
Computer	1. Out of total types of equipment items still in use = 11/15 (73%) 2. The 4 types of equipment not in use are: - Laser Printer (HP LASERJET 5000) – couldn't be repaired - Scanner (HP SCANJET 6100C) – couldn't be repaired - Scanner (Genius Colour Page VividPro-2) – couldn't be repaired - Portable Screen – the stand is broken 3. None of equipments were maintained in 2004 – 2006.
Electronics	1. Out of total types of equipment items still in use = 8/17 (47%) 2. The 9 types of equipment not in use are: - Graphics equalizer (Marantz EQ-580) (Quantity: 2) - Computer (IBM 300GL) (Quantity: 21) – outdated software and hardware - Programmable audio processor (Technics SH-D1000) - Server (Netfinity 5000) – currently not in used, expected to be used with new computer by mid of May. - ISA optical interface card (Yokogawa) – outdated data bus - Microsoft office 97' (software) – outdated - Windows NT work station (software) – outdated - Kedit for WINDOWS (software) – outdated - LabVIEW Ver 5.0 (software) – outdated 3. Maintenance had been carried out on: - Measuring station (WE400) – in 2004, estimated RM 5,000, due to bad switching power supply - Computer (IBM 300GL) – in 2004 & 2005, estimated RM3,000
Manufacturing	1. 83% of the equipment items are still in use = 10/12 (83%) 2. The 2 no longer in use are: - Laptop Acer DX5600 – broken casing, couldn't be used - Computer – operating system is in Japanese language 3. Maintenance had been carried out on: - CNC Turning Center (Hitachi CA23) – in 2005, estimated RM10,900, due to tool registration problem - CNC Grinding Center (Hitachi Seiki VKC 45) – in 2005, estimated RM18,000, due to spindle encoder and coolant pump problem - Mount Robot (Hitachi MR10) – in 2005, estimated RM50,000, due to axis servo controller problem

Department	Details
	- A full system maintenance (FMS), configuration and calibration was carried out in December 2005, which costs RM99,500, the equipment involved were: - CNC Turning Center - CNC Grinding Center - Mount Robot - Fanuc Robot - Automatic Warehouse - Automatic Guided Vehicle - Main Control - Computer
Mechatronics	1. All the equipment items are still in use = 14/14 (100%) 2. A preventive and breakdown maintenance had been carried out in 2005 on: - Fanuc M6i with Rail (Fanuc) - Fanuc M6i (Fanuc) - Industrial Robot (Mitsubishi RV-E2) - Industrial Robot (Mitsubishi RH-E3H) - Industrial Robot (Mitsubishi RV-E3J) which cost RM53,120 3. An internal maintenance was carried out in April 2007 on: - Industrial Robot (Mitsubishi RV-E2), to fix the broken servo pack.

Annex 5: JMTI Organisation Chart, 2007



Annex 6: Details of Tracer Study on JMTI 2005 and 2006 graduates

Department	Working	Further Study	Looking for Job	Total Analysis
Manufacturing	55	6	4	65
Mechatronic	52	13	10	75
Computer	45	11	16	72
Electronic	51	8	5	64
Total	203	38	35	276
	74%	14%	13%	

Department	Total Analysis	Sector (n)				Sector (%)			
		Public	Private	Self-employed	Total	Public	Private	Self-employed	Total
Manufacturing	65	3	51	1	**55**	5.5	92.7	1.8	**100.0**
Mechatronic	75	3	46	3	**52**	5.8	88.5	5.8	**100.0**
Computer	72	6	38	1	**45**	13.3	84.4	2.2	**100.0**
Electronic	64	1	50	0	**51**	2.0	98.0	0.0	**100.0**
Total	276	13	185	5	**203**	6.4	91.1	2.5	**100.0**

Department	Total Analysis	Occupational Field (%)							Total (n)
		Mechanical / Production	Electrical / Electronic	Civil / Construction	Printing	Non-metal	IT	Others	
Manufacturing	65	70.9	14.5	0.0	0.0	1.8	0.0	12.7	**55**
Mechatronics	75	59.6	19.2	3.8	0.0	0.0	3.8	13.5	**52**
Computer	72	22.2	11.1	0.0	0.0	0.0	33.3	33.3	**45**
Electronic	64	7.8	78.4	0.0	0.0	0.0	2.0	11.8	**51**
Total	276	41.4	31.0	1.0	0.0	0.5	8.9	17.2	**203**

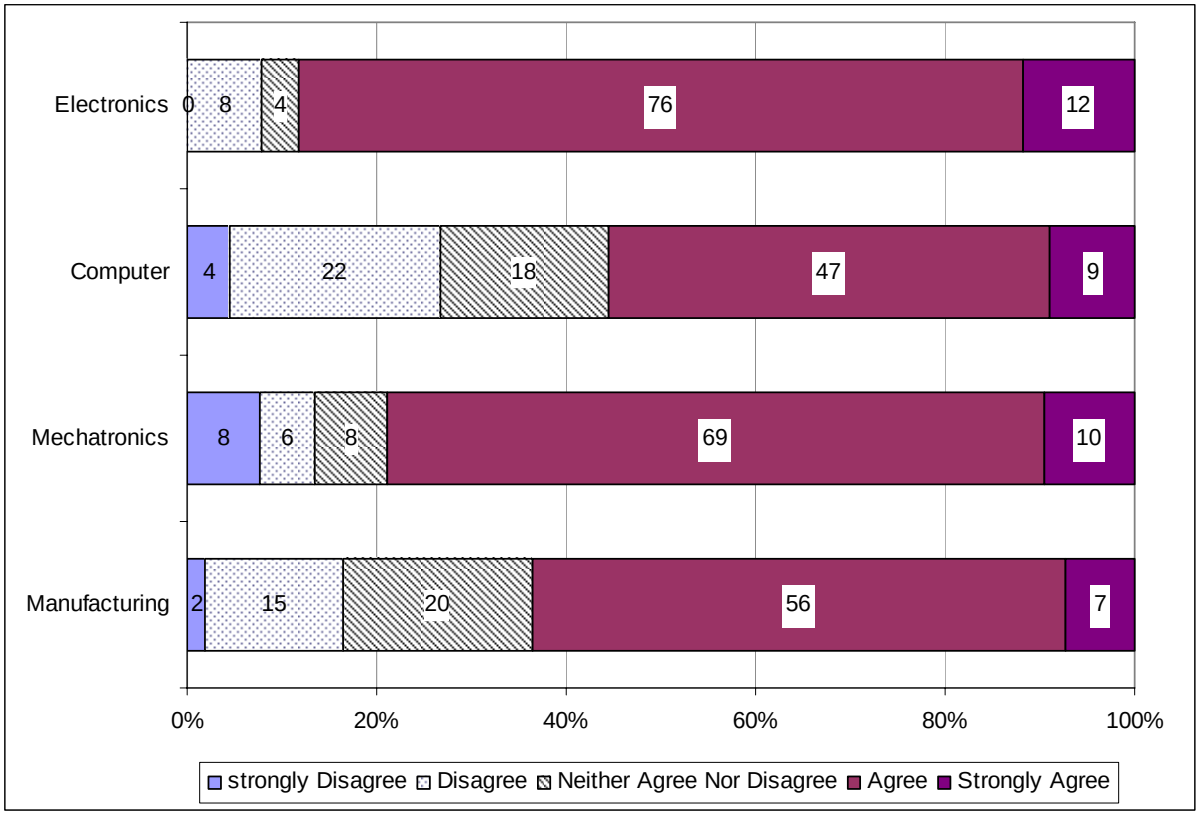
Department	Total Analysis	Occupation (%)							Total (n)
		Executive / Management	Engineer / Assistant Engineer	Supervisor	Lecturer/PPLV	Technician	Operator	Others	
Manufacturing	65	3.6	9.1	1.8	0.0	74.5	3.6	7.3	**55**
Mechatronics	75	0.0	5.8	3.8	1.9	78.8	3.8	5.8	**52**
Computer	72	8.9	2.2	0.0	2.2	48.9	4.4	33.3	**45**
Electronic	64	2.0	13.7	0.0	0.0	78.4	2.0	3.9	**51**
Total	276	3.4	7.9	1.5	1.0	70.9	3.4	11.8	**203**

Department	Total Analysis	Salary (%)					Total (n)
		< RM 400	RM 401-RM 800	RM 801-RM 1200	RM1201-RM1500	> RM 1500	
Manufacturing	65	0.0	3.6	43.6	25.5	27.3	**55**
Mechatronics	75	0.0	9.6	28.8	42.3	19.2	**52**
Computer	72	0.0	22.2	22.2	46.7	8.9	**45**
Electronic	64	0.0	5.9	29.4	54.9	9.8	**51**
Total	276	0.0	9.9	31.5	41.9	16.7	**203**

Department	Total Analysis	Further Study (%)				Total (n)
		Public University	Private University	Skills Training Institute	College University	
Manufacturing	65	33.3	33.3	0.0	33.3	**6**
Mechatronics	75	38.5	38.5	7.7	15.4	**13**
Computer	72	36.4	9.1	9.1	45.5	**11**
Electronic	64	25.0	25.0	12.5	37.5	**8**
Total	276	34.2	26.3	7.9	31.6	**38**

Department	Total Analysis	Looking for Job (%)					Total (n)
		Work Scope not suitable	Not satisfied with Salary	Position not suitable	Refuse to transfer	Others	
Manufacturing	65	50.0	0.0	50.0	0.0	0.0	**4**
Mechatronics	75	40.0	0.0	0.0	10.0	50.0	**10**
Computer	72	43.8	6.3	12.5	12.5	25.0	**16**
Electronic	64	40.0	20.0	20.0	0.0	20.0	**5**
Total	276	42.9	5.7	14.3	8.6	28.6	**35**

Able to apply the knowledge and skills that learned at ILJTM at current job. (%)



Annex 7: List of Companies Renting Equipment and Machinery from JMTI

No.	Name of Company	Type of Services	Department Involved
1	Power Choice Bhd.	Measuring Products, Coordinate Measuring Machine (CMM)	Manufacturing
2	Uni Mould M Bhd.	Measuring Products, Coordinate Measuring Machine (CMM)	Manufacturing
3	Kukum Staff Project Master	Measuring Products, Coordinate Measuring Machine (CMM)	Manufacturing
4	Kukum Student Project Degree	Measuring Products, Coordinate Measuring Machine (CMM)	Manufacturing
5	Hexafuji Sdn.Bhd.	Measuring Product	Manufacturing
6	CE Inovation Technology Sdn. Bhd	Measuring Product	Manufacturing
7	Z-F Steering	Measuring Product	Manufacturing
8	Fu Hao (M) Sdn. Bhd	Measuring Product	Manufacturing
9	Escatec Electronic Sdn. Bhd,	Measuring Product, Contour Test	Manufacturing
10	Frecken Malaysia Sdn. Bhd.	Measuring Products, Coordinate Measuring Machine (CMM)	Manufacturing
11	Lek Sun Manufacturing Sdn. Bhd	Measuring Products, Coordinate Measuring Machine (CMM)	Manufacturing
12	Selekta Inovatif (M) Sdn. Bhd.	Product Testing	Manufacturing
13	Aliran Teknik Sdn. Bhd.	Measuring Products, Coordinate Measuring Machine (CMM)	Manufacturing

Annex 8: List of Short Courses Offered by JMTI, 2007

No.	Code	Course	Department
1	P-1-1	BASIC MANUFACTURING TECH. ENGINEERING	Manufacturing Engineering Technology Department
2	P-2-1	MILLING PRACTICE	
3	P-3-1	TURNING PRACTICE	
4	P-4-1	GRINDING PRACTICE	
5	P-5-1	CNC-FUNDAMENTAL TURNING CENTER	
6	P-6-1	CNC FUNDAMENTAL MACHINING CENTER	
7	P-7-1	EDM FUNDAMENTAL	
8	P-8-1	CMM-FUNDAMENTAL	
9	P-9-1	CAD/CAM-2D WIREFRAME DESIGN	
10	P-9-2	CAD/CAM-3D WIREFRAME DESIGN & SURFACE MODELLING	
11	M-1-1	BASIC PROGRAMMABLE LOGIC CONTROLLER	Mechatronics Engineering Technology Department
12	M-1-2	INTERMEDIATE PLC	
13	M-2-1	PNEUMATIC	
14	M-2-2	ELECTRO-PNEUMATICS	
15	M-3-1	HYDRAULICS	
16	M-4-1	BASIC ROBOTICS	
17	M-7-1	BASIC SENSOR ENGINEERING	
18	K-1-1	MS-EXCEL 2000 BASIC	Computer Engineering Technology Department
19	K-2-1	MS-WORD 2000 BASIC	
20	K-3-1	MS-ACCESS 2000 BASIC	
21	K-4-1	MS-POINT 2000 BASIC	
22	K-5-1	VISUAL BASIC 6.0 BASIC	
23	K-6-1	C++ BASIC	
24	K-7-1	HTML BASIC	
25	K-8-1	PC MAINTENANCE BASIC	
26	K-9-1	PC ASSEMBLE BASIC	
27	K-10-1	PC NETWORKING BASIC	
28	K-11-1	BASIC INTERNET	
29	K-12-1	BASIC PROGRAMMING USING 8-BIT MICROPROCESSOR	
30	K-13-1	VISUAL C++ PROGRAMMING BASIC	
31	K-15-1	LINUX OPERATING SYSTEM BASIC	
32	E-1-1	BASIC LAB VIEW	Electronics Engineering
33	E-2-1	BASIC ELECTRONIC / ELECTRICAL ENGINEERING	

No.	Code	Course	Department
34	E-4-1	PCB (PRINTED CIRCUIT BOARD) DESIGN	Technology Department
35	E-5-1	BASIC POWER ELECTRONICS	
36	E-6-1	BASIC PROGRAMMABLE LOGIC DESIGN (PLD)	
37	MN-1-1	SHOP FLOOR CONTROL	Management Training
38	MN-1-2	MATERIALS AND INVENTORY MANAGEMENT	
39	MN-2-1	PRODUCTION PLANNING AND CONTROL	

Annex 9: List of Companies participated in JMTI Job Fair

Job Fair 2005

No.	Name of Company
1	Chuah Valve Manufacturing Sdn Bhd
2	Enesave Eng. Systems (Penang) Sdn. Bhd.
3	Frecken (M) Sdn Bhd
4	Fu Hao Manufacturing (M) Sdn. Bhd.
5	GKN Driveline (M) Sdn. Bhd.
6	Greatech Automation (M) Sdn. Bhd.
7	Hotayi Electronic (M) Sdn. Bhd.
8	Intel Product (M) Sdn Bhd
9	IPG Metal Industries (M) Sdn Bhd
10	Megatool Precision Sdn. Bhd.
11	Micro-Mechanic Technology Sdn Bhd
12	Molex (M) Sdn. Bhd.
13	Motorola
14	Paradigm Metal Industries Sdn. Bhd.
15	Penfabric Sdn. Bhd.
16	Penfibre Sdn. Bhd.
17	Presico Sdn. Bhd.
18	Prudential Assurance (M) Bhd
19	Quadra Group
20	Seimens VDO Instruments (M) Sdn. Bhd.
21	Swiss Garden Hotels
22	Taigene Metal (M) Sdn. Bhd.
23	Tesco Store
24	Wanjun Precision Machining Sdn. Bhd.

Job Fair 2006

No.	Name of Company
1	Advanced Ceramics Technology (M) Sdn Bhd
2	Aident Corporation Sdn Bhd
3	AJV Electronic Devices (M) Sdn Bhd
4	ATS Automation Malaysia Sdn. Bhd.
5	Axis Industrial Machinery Sdn Bhd
6	Centurian Wireless Components (M) Sdn Bhd
7	Chin Well Fastener Co. Sdn Bhd.
8	Chuah Valves Manufacturing Sdn Bhd
9	Creative Precision Engineering Sdn Bhd
10	Eonmetal Group Berhad
11	Fluid Control Engineering (M) Sdn Bhd
12	Gaban Spice Manufacturing (M) Sdn Bhd
13	Greatech Intergration (M) Sdn Bhd
14	Hockpin Precision Engineering Sdn Bhd
15	Hotayi Electronic (M) Sdn Bhd
16	KK Chong Engineering
17	Kobe Precision Technology Sdn Bhd
18	Konzen Engineering System Sdn Bhd
19	LBSB Group of Companies
20	Leadman Precision Egineering Sdn Bhd
21	Micro Mechanics Technology (M) Sdn Bhd
22	Molex (M) Sdn Bhd
23	NAZA Automotive Manufacturing Sdn. Bhd.
24	Panther Precision Tools Sdn Bhd
25	Precico Sdn Bhd
26	Selekta Inovatif (M) Sdn Berhad
27	Silterra (M) Sdn Bhd
28	Sinaran Manufacturing Sdn Bhd
29	Sony EMCS (M) Sdn. Bhd.
30	Spansion (Penang) Sdn Bhd
31	Taiyo Technology (M) Sdn Bhd
32	Toray Malaysia Group
33	UWC Holding Sdn Bhd

Annex 10: Interview Reports

MEETING NOTES

Time : 10.30 am to noon

Venue : Japan Malaysia Technical Institute (JMTI)
Plot 59, Lorong Perindustrian Bukit Minyak 15,
Taman Perindustrian Bukit Minyak,
14100, Simpang Ampat,
Seberang Perai Tengah, Pulau Pinang
Tel: 604-5087800 / Fax: 604-5087808
Website: http://www.jmti.gov.my

Participants : Mr. Zaihan Bin Shukri (Director, JMTI)
Hj. Azman Bin Hj. Ibrahim (Deputy Director, Corporate Planning and Development, JMTI)
Mr. Ahmad Nazri Bin Zainol (Deputy Director Engineering Training, JMTI)
Ms. Lim Pao Li (Consultant, PE Research)

Discussion brief

Mr Zaihan, the Director of JMTI chaired the meeting and welcomed the Ex-Post Evaluation Study. Ms Lim started the meeting by giving a brief overview on the project's terms of reference, i.e., the Ex-Post Evaluation Study and highlighted the reasons for the study. She also informed them that PE Research will be sending a Researcher to carry out the interviews and sought the cooperation of the management as well as the other officers.

Mr Zaihan acknowledged that they have received the questionnaires that were sent earlier as well as the requests for information. All these are being put together and he assured the study team of the cooperation. He will also arrange for the Researcher to interview the counterparts as well as the Senior Volunteers.

Since the project completion, Mr Zaihan pointed out that some of the counterpart officers have been promoted and are no longer with JMTI. However, he provided the Evaluation Team with the list in order to enable them to be surveyed too.

Focus of the Evaluation
The ex-post evaluation will focus on the impact and sustainability since project completion and lessons learned. The evaluation will be in the form of survey/interviews of:

- An assessment of the impact on JMTI, its organisation, and also among the JMTI counterparts, and
- Interviews with Senior Volunteers at JMTI.

The evaluation will also rely on data and reports provided by JMTI to measure the Project impacts.

It was highlighted that the assessment would also look into whether the recommendations made in the joint final evaluation report on the Follow-up Project have been implemented.

At the end of the meeting, JMTI provided the Evaluation Team with the following information:

- JMTI's Instructors List by Discipline
- Current List of Courses in JMTI by Department
- List of Malaysian Counterpart Personnel Trained
- List of Facilities, Machinery and Equipment provided by JICA for the project
- Number of Intakes and Graduates by Department from 1998 – 2006
- Records of Graduates Employment Situation
- Annual Reports of JMTI
- Organisation Chart of JMTI
- Status of JMTI Assets

SECOND INTERVIEW NOTES

Time : 9.30am to 5.00 p.m.

Venue : Japan Malaysia Technical Institute (JMTI)
Plot 59, Lorong Perindustrian Bukit Minyak 15,
Taman Perindustrian Bukit Minyak,
14100, Simpang Ampat,
Seberang Perai Tengah, Pulau Pinang
Tel: 604-5087800 / Fax: 604-5087808
Website: http://www.jmti.gov.my

Participants : Japan-Malaysia Technical Institute

1) Zaihan B Shukri (Director)
2) Hj. Azman B Hj. Ibrahim (Deputy Director, Corporate Planning & Development)
3) Meena a/p Ramalingam (HoD, Computer eng. Tech. Dept.)
4) Mohd Safri Mohd Dali (HoD, Electronics Eng. Tech. Dept.)
5) Zamzuri B Hassan (HoD, Manufacturing Eng. Tech. Dept.)
6) Mohd Zaibidi B Nordin (HoD, Mechatronics Eng. Tech Dept)

PE Research Sdn. Bhd.

1) Lim Ai Lee
2) Lee Lai Yee

Discussion brief:

After introduction of the purpose of the Ex-Post study on the JMTI Project in Malaysia and the reason of the study, Mr. Zaihan B Shukri has highlighted to all participants that the study will be carry out by Ms Lim and Ms Lee from PE Research Sdn Bhd, who have been selected by JICA. Mr. Zaihan mentioned that JMTI would give full cooperation for the Ex-Post evaluation study and all the Heads of departments have been told to give full support to the study team.

Ms Lim then explained the purpose for the Ex-Post Evaluation study highlighted that the Study focuses on the main evaluation of Impact and Sustainability of Project. JICA wants to learn lessons from the Projects for better-informed decision making. She has showed En. Zaihan the Evaluation Grid for the survey methodology.

Mr. Zaihan clarified that of the 97 Malaysian counterparts trained in this project, 42 still remain at JMTI (see Table A1), 55 are no longer with JMTI (see Table A2). 49 out of the 55 ex-counterparts have been transferred to other ITIs/Ministry, two are on study leave while the status of another four ex-counterparts are unknown.

Tn. Hj. Azman submitted the completed Counterparts Questionnaires to Ms. Lee Lai Yee for checking. She noticed that there was information needed missing. Therefore, the questionnaires were screened and a number of the counterparts were called upon to fill up the questionnaires.

The information provided for the management survey was clarified by Tn. Hj. Azman. There was information that required further assistance from the management, i.e. the basic information about JMTI staff trained under JICA project, and the budget allocations for the additional training of instructors. However, the management had only the lump sum of the

budget allocation for the additional training of instructors, as well as the total number of instructors trained.

The survey team had planned to visit and interview a few employers which employed JMTI graduates. However, the management, as well as the Heads of Department, they admitted that the relationship between JMTI and industry players needs to improve, and it was not possible for an immediate arrangement to visit the firms. Therefore, the Evaluation Team decided to contact the firms directly to seek their inputs.

According to Mr. Zaihan and Tn. Hj. Azman, most of the instructors in JMTI are Diploma or Degree holders. They agreed that JMTI is the best among all technical institutes in Malaysia in terms of the quality of trainees and the instructors. According to Mr. Zaihan, the management have plans to increase the number of intake, and also to expand JMTI, however, the current situation, particularly the availability of accommodation had been an impediment to the plans.

Mr. Zaihan indicated that JMTI has been taking good care of the facilities and equipment procured through project. JMTI has used the technologies transferred to produce highly skilled industrial technologist in manufacturing, electronics, computer and mechatronics. He added that JMTI is able to keep up to date on the skills needs of industry, basically research through the Technical Advisory Committee. The only negative aspect of the Project in terms of technology is the Malaysian Government and industry is moving into the area of bio-technology and nano-technology but JMTI does not have expertise in these two areas.

The questionnaires for JICA senior volunteers were handed in to Tn. Hj. Azman to distribute to the senior volunteers prior to the interview sessions with them the next day. Arrangement was made for the senior volunteers to be interviewed individually.

The equipment checking session was carried out based on the list of equipment provided earlier by the Heads of Department. Nevertheless, there were slight changes in the list of equipment of the Computer Department, and the new list provided by Ms. Meena a/p Ramalingam was used.

The equipment checking session was carried out in the afternoon. Photographs were taken. It started with Computer Department, led by Ms. Meena. Mr. Zaihan joined in after that, and the session continued by visiting Electronics Department, which was led by Mr. Mohd Safri Mohd Dali, Manufacturing Department led by Mr. Zamzuri B Hassan, and Mechatornics Department, led by Mr. Mohd Zaibidi B Nordin. Further information of the equipment or machineries checked could be viewed at Annex 4A and Annex 4B. The session ended at 5pm.

Table A1: Current Status of Malaysian Counterparts trained in this project

No.	Name	Computer	Electronics	Manufacturing	Mechatronics	Management	Remark
1	Mr. Ahmad Nazri B Zainol	X					Acting Deputy Director II (Engineering Training Division)
2	Mr. Azhari B Ismail		X				Assistant Vocational Training Officer
3	Mr. Azman B Ibrahim	X					Dep Director / Vocational Training Officer
4	Mr. Fakharudin B Mohd Yusof			X			Assistant Vocational Training Officer
5	Mr. Fakhrul Azman B Mohamed				X		Assistant Vocational Training Officer
6	Ms. Farahiah Bt Mohd Razari				X		Assistant Vocational Training Officer
7	Mr. Fazlul Rahman B Mohd Yunus		X				
8	Mr. Hamidom B Ngah			X			Head of Unit Training Vocational Officer Management
9	Ms. Ivo Rita Crustia Bt Salamon		X				Assistant Vocational Training Officer
10	Mr. Kamaruddin B Mohd	X					Assistant Vocational Training Officer
11	Mr. Mohamad Safri B Mohd Dali		X				HOD Electronic Engg Technology
12	Mr. Mohd Azhar B Yahaya		X				Assistant Vocational Training Officer
13	Mr. Mohd Bazri B Mohd Bahri Shah	X					
14	Mr. Mohd Halil B Nagan	X					Assistant Vocational Training Officer
15	Mr. Mohd Lazim B Mat Lazi				X		Vocational Training Officer
16	Mr. Mohd Raffi B Abd Rahman			X			
17	Mr. Mohd Rafizal B Abd Rahid			X			Assistant Vocational Training Officer
18	Mr. Mohd Zaibidi B Nordin				X		HOD Mechatronic Engg Technology
19	Mr. Munirshah B Sumiri			X			Vocational Training Officer
20	Tn. Hj. Noordin B Abdullah			X			Head of Unit Technical Control
21	Ms. Nur Rizana Mohd Said				X		Assistant Vocational Training Officer
22	Mr. Roslan B Mat Ariff			X			Assistant Vocational Training Officer
23	Mr. Rustam B Sulaiman				X		Assistant Vocational Training Officer
24	Mr. Sahadi B MD Aziz				X		Assistant Vocational Training Officer
25	Mr. Salam B Taazim				X		Assistant Vocational Training Officer
26	Mr. Shahran B Othman			X			Assistant Vocational Training Officer
27	Tn. Hj. Shahrudin B Othman		X				Instructor
28	Mr. Shamsul Basri B Bahrom				X		
29	Mr. Sha'rani B Taib				X		Head of Unit Training Management
30	Mr. Shukri B Che Hassan			X			Head of Unit Dual National Training System
31	Ms. Syamsiah Bt Salleh				X		Vocational Training Officer
32	Mr. Yaakob B Saad				X		Head of Unit Skill Development

No.	Name	Computer	Electronics	Manufacturing	Mechatronics	Management	Remark
33	Mr. Zaidi B Kassim				X		Assistant Vocational Training Officer
34	Mr. Zaihan Shukri					X	Director
35	Mr. Zainal B Atan		X				Vocational Training Officer
36	Mr. Zainol B Abd Razak			X			
37	Mr. Zamzuri B Hassan			X			HOD Mfg Engineering Technology
38	Ms. Zainila bt. Salam			X			Head of Unit Certification and Examination
39	Ms. Zatulmaharah bt Baian@ byin	X					Assistant Vocational Training Officer
40	Mr. Zulkifli b Saad			X			Assistant Vocational Training Officer
41	*Mr. Johari b. Hj Mohd Tahar*		X				Vocational Training Officer (Transit JMTI – ADTEC Taiping)
42	*Mr. Mohd Sukimi b Mat Salleh*			X			Deputy Director (Transit JMTI – ADTEC Taiping)

Table A2: Current Status of Malaysian Ex-Counterparts trained in this project

No.	Name	Current Status
1	Mr. Abd. Halim b Ali Mohamed	Director, ITI Labuan
2	Mr. Abdul Halim b Abd. Rahman	Director, ITI Kepala Batas
3	Mr. Abdul Halim b Mustafa	ITI Jitra
4	Mr. Abdullah Hapipi b Daimon	Director, IKBN Dusun Tua
5	Mr. Abu Mansor b Abd Mutalib	ITI Bukit Katil, Melaka
6	Mr. Azmanaruzee b Abdullah	CIAST Shah Alam
7	Mr. Azmi b Ahmad	Director, ITI Jitra
8	Mr. Azmi b Mat	Head of Department, ITI Nibong Tebal
9	Mr. Azmir b Mohd Yunus	Deputy Director, ADTECc Melaka (on Study Leave at UKM)
10	Ms. Dalila bt Sharingat	Head of Department, CIAST Shah Alam
11	Ms. Faizah bt Harun	Head of Department, CIAST Shah Alam (on Study Leave at UPM)
12	Ms. Fardila bt Azman Lingam	Head of Department, ITI Kuantan
13	Mr. Habibollah b Mahmud	ITI Jitra
14	Ms. Hafazah bt Jaffar	ADTEC Shah Alam
15	Mr. Abdul Wahid b Embong	Director, ITI Selandar, Melaka
16	Mr. Isham b Md Tamimi	ITI Jitra
17	Mr. Ismawi b Ismail	Head of Department ITI Labuan
18	Mr. Jailani b Abdullah	JTM HQ, Putrajaya (Training Management)
19	Mr. Jamil b Yahaya	Director, IKBN Bukit Mertajam
20	Ms. Junnainah bt Husin Chua	Department Director, ADTEC Melaka
21	Mr. Khairul Anuar b Deni	Director, ITI Kota Kinabalu

No.	Name	Current Status
22	Mr. Mahadi b Mat Idris	ITI Labuan
23	Mr. Md. Fuzailee b Sabu	Deputy Director, ITI Kangar
24	Mr. Mohd Rosli b Hussain	ITI Kuala Lumpur
25	Mr. Mohd Sanusi b Yusof	ITI Kuala Terengganu
26	Mr. Mohd Suhaini b Hashim	ITI Jitra
27	Mr. Mohd Yusri b Mohd Rahim	Head of Department, ITI Kangar
28	Mr. Mohd. Manoj b Jumidali	Director, ITI Kuala Langat
29	Mr. Mohd. Sukri b Ismail	Director, ITI Kuala Terengganu
30	Mr. Mustapa b Minhat	ITI Bukit Katil, Melaka
31	Mr. Nasaruddin b Mohd Khalid	Head of Department, CIAST Shah Alam
32	Mr. Nazir b Elias	ITI Sandakan
33	Mr. Nikmat b Mohamd	Head of Department, ITI Nibong Tebal
34	Ms. Nor Asykin bt Ismail	ITI Nibong Tebal
35	Ms. Noraila bt Md Noor	ITI Kepala Batas
36	Ms. Noraishah bt Mohamad	Left JMTI
37	Ms. Norliza bt Yaakob	Director, ITI Kangar
38	Mr. Pezol Ahmad b Yahya	CIAST, Shah Alam
39	Ms. Salamiyah bt Ismail	ITI Kuala Lumpur
40	Mr. Samsuri b Arif	Head of Department, ITI Kuantan
41	Mr. Seliman b Wagimin	ADTEC Shah Alam
42	Ms. Shamsida bt Zainal Abidin	Skill Development Department Putrajaya
43	Ms. Suzrinnelly Mohd Salleh	ITI Kuala Langat
44	Mr. Syahmi b Ramley	Left JMTI
45	Tn. Hj. Tukimin b Solehan	CIAST Shah Alam
46	Mr. Wan Mohd Asri b Wan Zakaria	ADTEC Shah Alam
47	Mr. Yusni b Abd Rahim	CIAST Shah Alam
48	Mr. Yusri b Md Yusof	ITI Kepala Batas
49	Ms. Zafitul Azida bt Sa'adin	Left JMTI
50	Mr. Zaidi b Mat Tan	ITI Bukit Katil, Melaka
51	Mr. Zakaria b Sidek	IKBN Chembong, Negeri Sembilan
52	Mr. Zamberi b Jamaludin	Left JMTI
53	Mr. Zulkefli b Abd Maman	Director, ITI Pedas, Negeri Sembilan
54	Mr. Zulkifli b Omar	Head of Department, CIAST Shah Alam
55	Ms. Zuraini bt Muda	Department Director, ADTEC Shah Alam

Annex 11: Persons Surveyed/Interviewed

Counterparts at JMTI

Organisation	Name/Position	Contact
Japan Malaysia Technical Institute (JMTI) Plot 59, Lorong Perindustrian Bukit Minyak 15, Taman Perindustrian Bukit Minyak 14100 Simpang Ampat, Seberang Perai Tengah, Pulau Pinang	Mr. Ahmad Nazri b Zainol Acting Deputy Director II (Engineering Training Division)	Tel.:04-5087800 Ext: 2512 Fax.:04-5087809 Email: nazri@jmti.gov.my
	Mr. Azhari b Ismail (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2305 Fax.:04-5087809 Email: azhari@jmti.gov.my
	Mr. Azman b Ibrahim (Deputy Director)	Tel.:04-5087800 Ext: 2513 Fax.:04-5087809 Email: azman@jmti.gov.my
	Mr. Fakharudin b Mohd Yusof (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2204/2995 Fax.:04-5087809 Email: fakharudin@jmti.gov.my
	Mr. Fakhrul Azman b Mohamed (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2313 Fax.:04-5087809 Email: fakhrul@jmti.gov.my
	Ms. Farahiah bt Mohd Razari (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2220 Fax.:04-5087809 Email: farah@jmti.gov.my
	Mr. Fazlul Rahman b Mohd Yunus	Tel.:04-5087800 Ext: 2288 Fax.:04-5087809 Email: fazlul@jmti.gov.my
	Mr. Hamidom b Ngah Head of Unit Training (Vocational Officer Management)	Tel.:04-5087800 Ext: 2432 Fax.:04-5087809 Email: hamidom@jmti.gov.my
	Ms. Ivo Rita Crustia bt Salamon (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2306 Fax.:04-5087809 Email: ivorita@jmti.gov.my
	Mr. Kamaruddin B Mohd (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2263 Fax.:04-5087809 Email: kamaruddin@jmti.gov.my
	Mr. Mohamad Safri b Mohd Dali (HOD Electronic Engineering Technology)	Tel.:04-5087800 Ext: 2287 Fax.:04-5087809 Email: safri@jmti.gov.my
	Mr. Mohd Azhar b Yahaya (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2286 Fax.:04-5087809 Email: azhar@jmti.gov.my
	Mr. Mohd Bazri b Mohd Bahri Shah	Tel.:04-5087800 Ext: 2423 Fax.:04-5087809 Email: bazri@jmti.gov.my
	Mr. Mohd Halil b Nagan (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2256 Fax.:04-5087809
	Mr. Mohd Lazim b Mat Lazi (Vocational Training Officer)	Tel.:04-5087800 Ext: 2222 Fax.:04-5087809 Email: mohdlazim@jmti.gov.my

Organisation	Name/Position	Contact
	Mr. Mohd Raffi b Abd Rahman	Tel.:04-5087800 Ext: 2207 Fax.:04-5087809
	Mr. Mohd Rafizal b Abd Rahid (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2214 Fax.:04-5087809
	Mr. Mohd Zaibidi b Nordin (HOD Mechatronic Engineering Technology)	Tel.:04-5087800 Ext: 2230 Fax.:04-5087809 Email: zaibidi@jmti.gov.my
	Mr. Munirshah b Sumiri (Vocational Training Officer)	Tel.:04-5087800 Ext: 2210 Fax.:04-5087809
	Tn. Hj. Noordin b Abdullah (Head of Unit Technical Control)	Tel.:04-5087800 Ext: 2410 Fax.:04-5087809 Email: noordin@jmti.gov.my
	Ms. Nur Rizana Mohd Said (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2227 Fax.:04-5087809 Email: rizana@jmti.gov.my
	Mr. Roslan b Mat Ariff (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2216 Fax.:04-5087809
	Mr. Rustam B Sulaiman (Assistant Vocational Training Officer)	Tel.:04-5087800 Ext: 2222 Fax.:04-5087809 Email: rustam@jmti.gov.my
	Mr. Sahadi b MD Aziz (Assistant Vocational Training Officer)	Tel.:04-5087800 Ext: 2222 Fax.:04-5087809 Email: sahadi@jmti.gov.my
	Mr. Salam b Taazim (Assistant Vocational Training Officer)	Tel.:04-5087800 Ext: 2227 Fax.:04-5087809 Email: salam@jmti.gov.my
	Mr. Shahran b Othman (Assistant Vocational Training Officer)	Tel.:04-5087800 Ext: 2425 Fax.:04-5087809 Email: shahran@jmti.gov.my
	Tn. Hj. Shahrudin b Othman Instructor	Tel.:04-5087800 Ext: 2276 Fax.:04-5087809 Email: shahrudin@jmti.gov.my
	Mr. Shamsul Basri b Bahrom	Tel.:04-5087800 Ext: 2230 Fax.:04-5087809
	Mr. Sha'rani b Taib (Head of Unit Training Management)	Tel.:04-5087800 Ext: 2515 Fax.:04-5087809 Email: sharani@jmti.gov.my
	Mr. Shukri b Che Hassan (Head of Unit Dual National Training System)	Tel.:04-5087800 Ext: 2406 Fax.:04-5087809 Email: shukri@jmti.gov.my
	Ms. Syamsiah bt Salleh (Vocational Training Officer)	Tel.:04-5087800 Ext: 2230 Fax.:04-5087809 Email: syamsiah@jmti.gov.my
	Mr. Yaakob b Saad (Head of Unit Skill Development)	Tel.:04-5087800 Ext: 2408 Fax.:04-5087809 Email: yaakob@jmti.gov.my
	Mr. Zaidi b Kassim (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2313 Fax.:04-5087809 Email: zaidi@jmti.gov.my

Organisation	Name/Position	Contact
	Mr. Zaihan Shukri (Director)	Tel.:04-5087800 Ext: 2501 Fax.:04-5087809 Email: zaihan@jmti.gov.my
	Mr. Zainal b Atan (Vocational Training Officer)	Tel.:04-5087800 Ext: 2288 Fax.:04-5087809
	Mr. Zainol b Abd Razak	Tel.:04-5087800 Ext: 2217 Fax.:04-5087809
	Mr. Zamzuri b Hassan (HOD Manufacturing Engineering Technology)	Tel.:04-5087800 Ext: 2211 Fax.:04-5087809 Email: zamzuri@jmti.gov.my
	Ms. Zainila bt. Salam (Head of Unit Certification and Examination)	Tel.:04-5087800 Ext: 2407 Fax.:04-5087809 Email: zainila@jmti.gov.my
	Ms. Zatulmaharah bt Baian @ byin (Assistant Vocational Training Officer)	Tel.:04-5087800 Ext: 2124 Fax.:04-5087809 Email: zatul@jmti.gov.my
	Mr. Zulkifli b Saad (Asst Vocational Training Officer)	Tel.:04-5087800 Ext: 2207 Fax.:04-5087809
	Mr. Johari b. Hj Mohd Tahar (Vocational Training Officer) (Transit JMTI – ADTEC Taiping)	Tel.:04-5087800 Fax.:04-5087809
	Mr. Mohd Sukimi b Mat Salleh (Deputy Director) (Transit JMTI – ADTEC Taiping)	Tel.:04-5087800 Fax.:04-5087809 Email: sukimi@jmti.gov.my

JMTI Ex-Counterparts

Organisation	Name/Position	Contact
CIAST, Shah Alam Peti Surat 7012 Jalan Petani 19/1 Seksyen 19, 40900 Shah Alam Selangor	Mr. Nasaruddin B Mohd Khalid (Vocational Training Officer)	Tel.: 03-55415736 Fax.: 03-55414807 Email: nasamohd@hotmail.com
Department of Skills Development Level 7 & 8, Block D4, Parcel D, Federal Government Administrative Centre 62530, FT Putrajaya	Pn. Shamsida bt Zainal Abidin (Assistant Director)	Tel.: 03-88865000 D/L: 03-88865434 Fax.: 03-88892381 Email: shamsida@mohr.gov.my
JTM HQ Level 6, Block D4, Complex D, Pusat Pentadbiran Kerajaan Persekutuan, 62530 WP Putrajaya	Mr. Jailani b Abdullah (Vocational Training Officer)	Tel.: 03-88865000 Ext: 5559 Fax.: 03-88892417 Email: jailani@mohr.gov.my

Organisation	Name/Position	Contact
ITI Bukit Katil, Melaka Lot 1729, Mukim Bukit Katil, 75450 Melaka	Mr. Abu Mansor b Abd Mutalib (Asst Vocational Training Officer)	Tel.: 06-2320600 D/L: 06-2320752 Fax.: 06-2329600 Email: abumansor@ilpmelaka.gov.my
ITI Labuan Jalan Mohd Salleh P.O. Box 80849 87018 WP Labuan	Mr. Ismawi b Ismail (Head of Mechanical and Production Department)	Tel.: 087-414911 Ext: 103 Fax.: 087-422500
ITI Nibong Tebal Lot 549 Mukim 7 Jalan Bukit Panchor 14300 Nibong Tebal, Seberang Perai Selatan, Pulau Pinang	Pn. Nor Asyikin bt Ismail (Asst Vocational Training Officer)	D/L: 04-5956059 Fax.: 04-5956011 Email: syikin@ilpapnt.gov.my
	Mr. Azmi b Mat (Head of Mechanical and Production Department)	D/L: 04-5956083 Fax.: 04-5956011 Email: azmi@ilpapnt.gov.my
ITI Kepala Batas Lot 2022, Jalan Pokok Jenerih, 13200 Kepala Batas, Pulau Pinang	Mr. Yusri b Md Yusof (Asst Vocational Training Officer)	Tel.: 04-5776100 Ext: 116 Fax.: 04-5776144 Email: yusri@ilpkbpp.gov.my
	Pn. Noraila bt Md Noor (Asst Vocational Training Officer)	Tel.: 04-5776100 ext 169 Fax.: 04-5776144 Email: noraila@ilpkbpp.gov.my
ITI Kuala Langat Jalan Jugra, 42700 Banting, Selangor	Mr. Mohd. Manoj b Jumidali (Director)	Tel: 03-31204713 Fax: 03-31204440 Email: manoj@ilpkls.gov.my
ITI Sandakan Batu 5, Jalan Sibuga, 90000 Sandakan, Sabah	Mr. Nazir b Elias (Asst Vocational Training Officer)	Tel.:089-240500 Fax.: 089-240555
ITI Selandar Lot 1468, Jalan Batang Melaka, 77500 Selandar, Melaka	Tn. Hj. Abdul Wahid b Embong (Director)	D/L: 06-5251202 Fax.: 06-5251255 Email: abdulwahid@ilpselandar.gov.my

JICA Senior Volunteers at JMTI

Name/Department	Contact
Mr. Kiyoshi Adachi (Engineering Consultancy Services)	Tel: 04-5087800 Ext:8233 Fax: 04-5025204 Email: adachi@jmti.gov.my
Mr. Hideaki Suzuki (Manufacturing Engineering Technology Department)	Tel: 04-5087800 Ext: 2221 Fax: 04-5087808 Email: hideszk@vega.ocn.ne.jp
Mr. Seiki Nagata (Senior Volunteer)	Tel: 019-2816439 Email: nagata75@yahoo.co.jp

Employers

Organisation	Name/Position	Contact
GKN Driveline Malaysia Sdn Bhd	Pn. Nooriha Mohd Amin HR Officer	Tel: 04-3999946 Fax: 04-3999950 Email: NoorihaMohdAmin@gkndriveline.com
Saxco Marketing Sdn Bhd	Ms. Theresa HR Manager	Tel: 03-78802299 Fax: 03-78800929 Email: theresa@saxco.com
Renesas Semiconductors Sdn Bhd	Mr. Leong Keen Hou Assistant Manager	Tel: 04-6438121 Fax: 04-6434190
Keyence (M) Sdn Bhd	Ms. Theng Pei Yin HR Manager	Tel: 03-20922211 Fax: 03-20922131
Yayasan Pendidikan & Vokasional Wanita Malaysia	Mr. Mohd Amir Ibrahim Administrator	Tel: 03-79541244 (Ext: 104)
Komag USA (Malaysia) Sdn Bhd	Aini Hussain Staffing Department	Tel: 04-8506160 (Ext 6220)

Annex 12A: Survey Findings- Counterpart & Ex-Counterpart Survey

Table 1: Distribution of Counterparts by Gender

	Counterpart		Ex-Counterpart		Total	
	Percent	**n**	**Percent**	**n**	**Percent**	**n**
Male	85.4	35	75.0	9	83.0	44
Female	14.6	6	25.0	3	17.0	9
Total	**100.0**	**41**	**100.0**	**12**	**100.0**	**53**

Source: Counterpart & Ex- Counterpart Survey

Table 2: Highest Professional Qualification Obtained by Counterparts

	Counterpart		Ex-Counterpart		Total	
	Percent	**n**	**Percent**	**n**	**Percent**	**n**
SKM	2.4	1	-	-	1.9	1
MLVK L3	2.4	1	-	-	1.9	1
Higher National Diploma	19.5	8	18.2	2	19.2	10
Diploma	24.4	10	27.3	3	25.0	13
Advanced Diploma	-	-	9.1	1	1.9	1
Degree	39.0	16	36.4	4	38.5	20
Master	12.2	5	9.1	1	11.5	6
Total	**100.0**	**41**	**100.0**	**11**	**100.0**	**52**

Source: Counterpart & Ex- Counterpart Survey

Table 3: Why did you leave JMTI?

	Percent	n
Better Offer	-	0
Promotion	33.3	4
Personal Matter	25.0	3
Others	41.7	5
Total	100.0	12

Source: Ex-Counterpart Survey Question c)

Table 4: Rate the usefulness of the training during the Project to current job?

	Percent	n
Very useful (Utilise more than 80%)	25.0	3
Some degree (Utilise more than 50%)	50.0	6
A little (Utilise less than 50%)	-	0
Not applicable.	25.0	3
	100.0	12

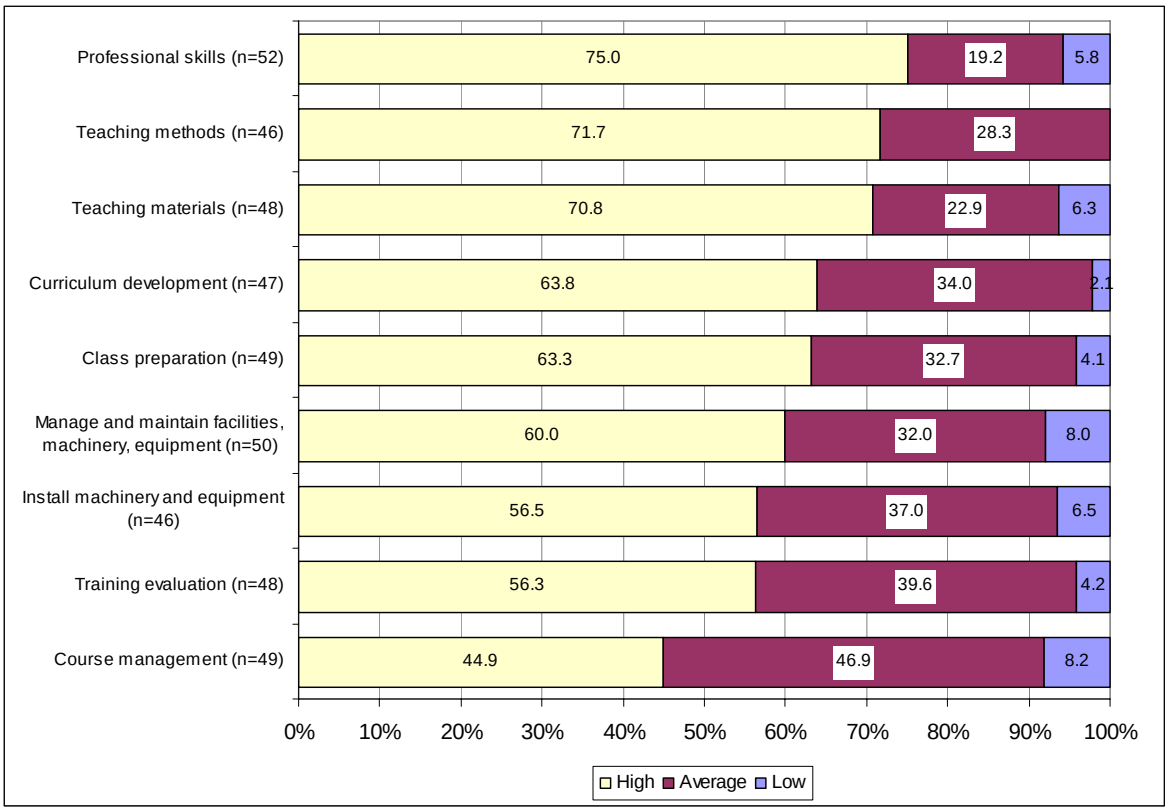
Source: Ex-Counterpart Survey Question e)

Table 5: Overall Level of JMTI's Capability in Producing Highly Skilled Industrial Technologist (L4) in the Field of High Technology

JMTI's Capability	Counterpart		Ex-Counterpart		Total	
	Percent	n	Percent	n	Percent	n
Low	-	0	-	0	-	0
Average	27.8	10	20.0	2	26.1	12
High	72.2	26	80.0	8	73.9	34
Total	**100.0**	**36**	**100.0**	**10**	**100.0**	**46**

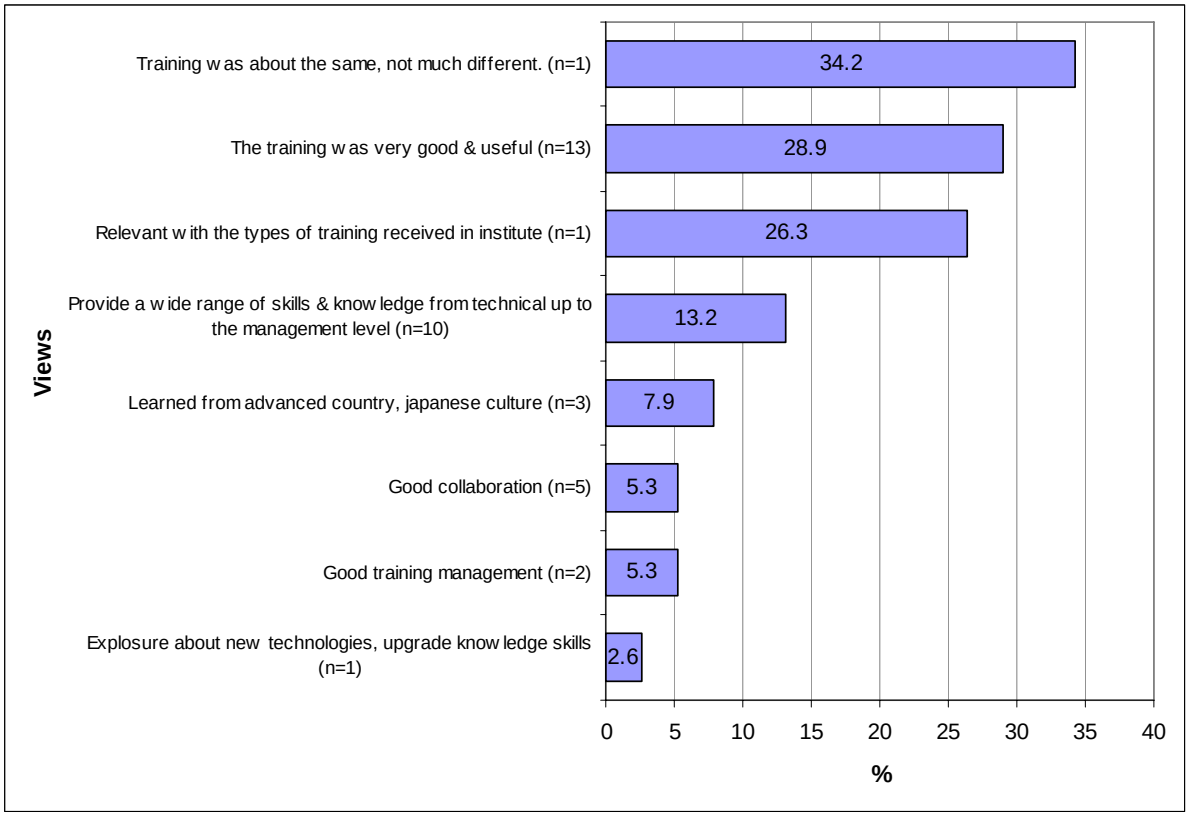
Source: Counterpart Survey Q1.1 (Five counterparts indicated 'no comment'); & Ex- Counterpart Survey Q1.1 (Two ex-counterparts indicated 'no comment')

Figure 1: Extent this Project succeeded in enhancing capability in providing such services in Malaysia?



Source: Counterpart Survey Q1.2, Ex-Counterpart Survey Q1.2

Figure 2: What in your view was particularly distinctive about JICA Project and the training that you received?



Source: Counterpart Survey Q1.3. Respondents gave more than one answer. (3 missing cases; 38 valid cases)

Table 6 What in your view was particularly distinctive about JICA Project and the training that you received?

	Percent	n
The training was very good & useful	37.5	3
Provide a wide range of skills & knowledge from technical up to the management level	25.0	2
Good collaboration	12.5	1
Learned from the advanced country, Japanese culture	12.5	1
Inter relation between cost effective and training level upgrading	12.5	1
Total	100.0	8

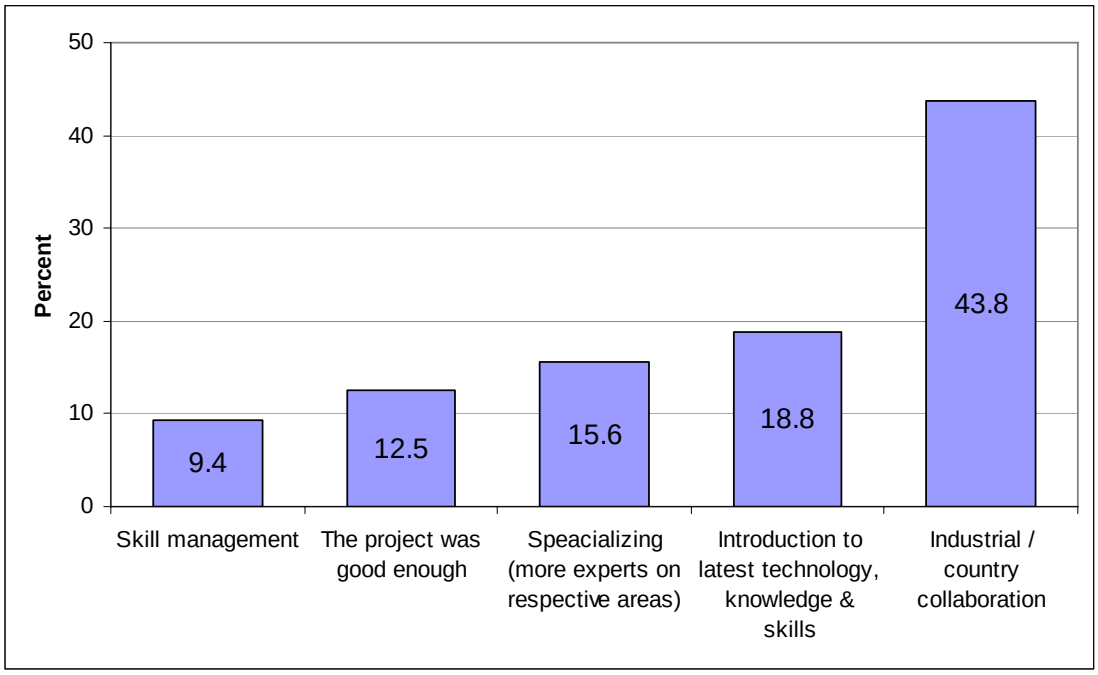
Source: Ex-Counterpart Survey Q1.3 (Four Missing cases)

Table 7: How would you compare the JICA training with other training that you had undertaken in JMTI (Counterpart), current institute and when you were with JMTI (ex-counterpart)?

	Counterpart		Ex-counterpart			
			Current Institute		JMTI	
	Percent	n	Percent	n	Percent	n
Better	73.2	30	40.0	4	54.5	6
Same	24.4	10	40.0	4	45.5	5
Worse	2.4	1	20.0	2	-	0
Total	100	41	10.0	10	11.0	11

Source: Counterpart Survey Q1.4, Ex-Counterpart Survey Q1.4 (Ten valid cases for current institutes, 11 valid cases for JMTI)

Figure 3: In your view, were there any areas that would have enhanced the impact of the project even more than it has?



Source: Counterpart Survey Q1.5 (9 missing cases; 32 valid cases)

In your view, were there any areas that would have enhanced the impact of the project even more than it has?

- Teach more detail about current technology (specific to certain field) (n=3)
- Participants would benefit more if they were attached to industries/companies (n=1)
- Continuous training and further collaboration or exchanging trainer (n=1)

Source: Ex-Counterpart Survey Q1.5

Table 8: How many courses are you teaching now?

Number of Courses Teaching	Counterpart (n)	Ex-counterpart (n)	
	Number of Courses Teaching at JMTI	Number of Courses Teaching currently	Number of Courses Teached at JMTI
1 course	6	2	-
2 courses	15	1	1
3 courses	2	-	1
4 courses	9	-	2
5 courses	-	1	-
6 to 10 courses	6	-	-
More than 10 courses	2	-	-
Total	40	4	4

Source: Counterpart Survey Q1.6, (Note: Mr. Zaihan Shukri, Director of JMTI is not involved in teaching activity), Ex-Counterpart Survey Q1.7 (Three missing cases)

Table 9: How many of these use skills acquired during the JICA project?

Number of Courses using Project Skills	Counterpart (n)	Ex-counterpart (n)	
	JMTI	Current institute	JMTI
Not Used	-	2	1
1 course	18	-	2
2 courses	11	1	-
3 courses	2	-	-
4 courses	3	1	1
5 and Above	5	-	-
Total	**39**	**4**	**4**

Source: Counterpart Survey Q1.6 (One missing case; 39 valid cases), Ex-Counterpart Survey Q1.7 (Three missing cases)

Table 10: Give your best estimate of how much time you spend using Project equipment or skills acquired as a proportion of your total working hours?

% of Times	Counterpart (n)	Ex-counterpart (n)	
	JMTI	Current institute	JMTI
Not Used	-	1	-
1 to 25%	5	2	1
26 to 50%	11	1	2
51 to 75%	15	-	-
More than 75%	8	1	2
Total	**39**	**4**	**5**

Source: Counterpart Survey Q1.7 (Two missing case; 39 valid cases), Ex-Counterpart Survey Q1.8

Table 11: Have you conducted any training for JMTI staff or other MoHR institutes using the skills that were acquired during the Project?

	Counterpart		Ex-counterpart		
	Trained JMTI Staff	Trained other MoHR Institutes's Staff	Trained JMTI Staff	Staff at current institute	Trained other MoHR Institute's staff
Yes	21	17	4	3	2
No	20	24	8	9	10
Total	41	41	12	12	12

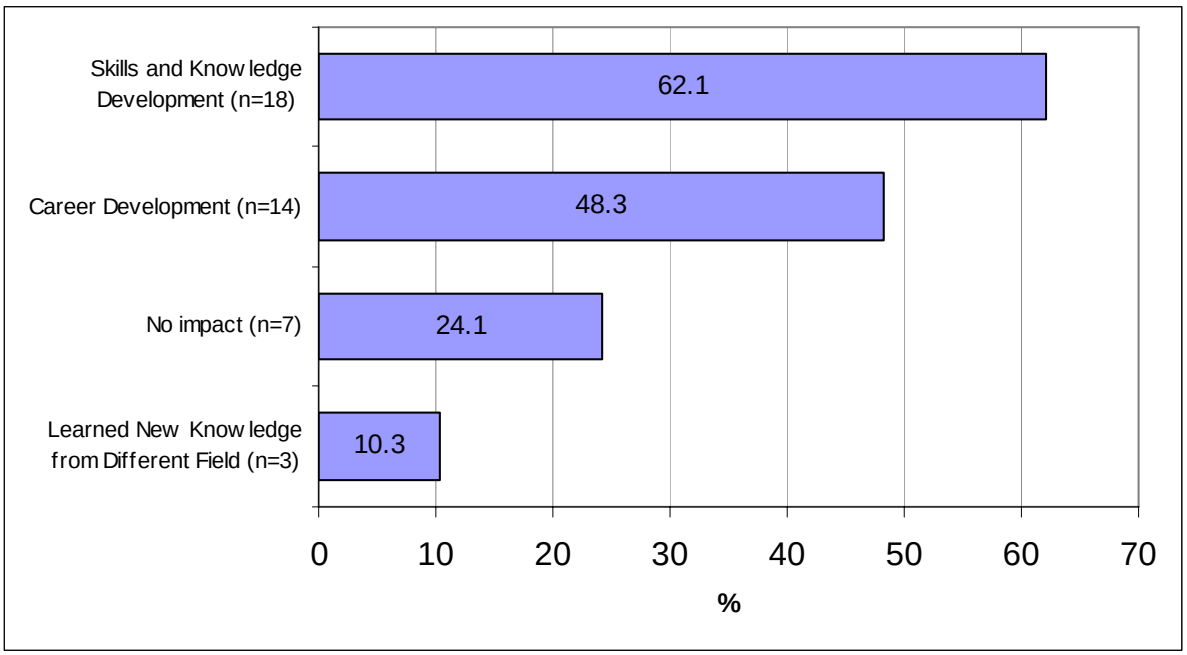
Source: Counterpart Survey Q1.8 and Q1.9, Ex-Counterpart Survey Q1.9 and Q1.10

Table 12: Counterparts' (CP) and Ex-counterpart's (EC) view about the capabilities of the trainees at JMTI.

	n	Percent				
		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Overall, trainees at JMTI have the prerequisite qualifications and were able to follow the curriculum easily.	CP (n=41)	2.4	2.4	4.9	68.3	22.0
	EC (n=12)	-	-	8.3	91.7	-
Trainees at JMTI are interested in the courses they attend.	CP (n=41)	-	4.9	12.2	58.5	24.4
	EC (n=12)	8.3	-	8.3	66.7	16.7
Trainees at JMTI are good at applying the theory to practical applications.	CP (n=41)	-	4.9	9.8	61.0	24.4
	EC (n=12)	-	-	16.7	66.7	16.7
Trainees at JMTI have effective problem solving skills.	CP (n=41)	-	7.3	24.4	61.0	7.3
	EC (n=12)	-	-	25.0	58.3	16.7
Trainees at JMTI have the ability to work successfully in teams.	CP (n=41)	-	2.4	14.6	70.7	12.2
	EC (n=12)	-	-	8.3	66.7	25.0
Trainees at JMTI have the ability to adapt their knowledge and skills.	CP (n=41)	-	2.4	14.6	70.7	12.2
	EC (n=11)	-	-	9.1	81.8	9.1
Trainees at JMTI have strong work ethics (i.e. hard working, dependable, cooperative and honest).	CP (n=41)	-	4.9	41.5	39.0	14.6
	EC (n=11)	-	-	9.1	81.8	9.1
The trainees at JMTI met or exceeded my expectations.	CP (n=41)	-	4.9	19.5	68.3	7.3
	EC (n=12)	-	-	33.3	58.3	8.3

Source: Counterpart Survey Q1.10 to Q1.17; Ex-Counterpart Survey Q1.11 to Q1.18

Figure 4: Any unintended benefits from the Project for you? (E.g. training accepted as waiver for a professional qualification, career improved, awards, etc)



Source: Counterpart Survey Q2.1. Respondents gave more than one answer. (12 missing cases; 29 valid cases)

Unintended benefits and problems from the Project for <u>counterparts</u> are listed below:

- Communication with instructor (n=1)
- Knowledge & skill at the stagnant level (n=1)
- Expertise lost because of the promotion to other institute (n=1)
- Missed promotion if the training take many months or years (n=1)

Source: Counterpart Survey Q2.2

Unintended benefits and problems from the Project for <u>ex-counterparts</u> are listed below:

<u>Unintended benefits from the Project:</u>

- Knowledge & skills development (n=2); and
- Career improved (n=2)

<u>Unintended problems and issues of the Project:</u>

- Only one ex-counterpart has indicated that he missed the promotion due to seniority practices by MoHR.

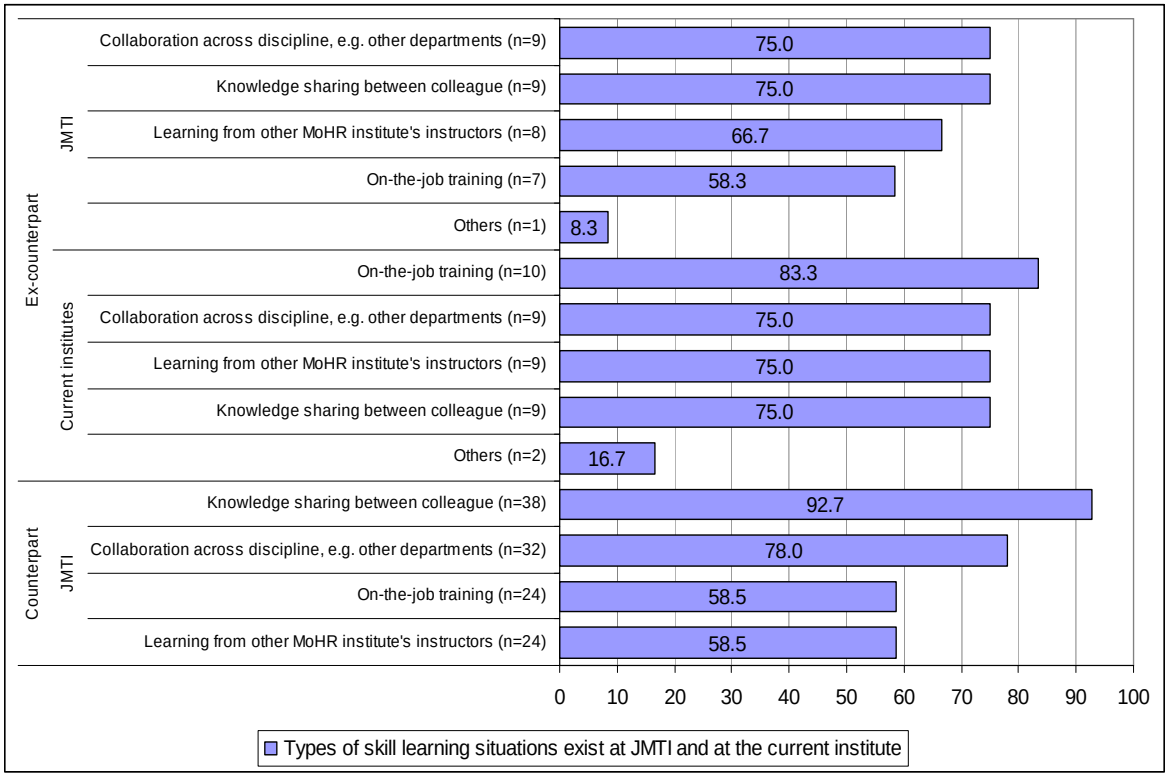
Source: Ex-Counterpart Survey Q2.1 and Q2.2

Table 13: Have you upgraded or expanded your skills and knowledge which you have acquired through the Project, through formal training since Project completion?

	Counterpart		Ex-Counterpart		Total	
	Percent	n	Percent	n	Percent	n
Yes	68.3	28	54.5	6	65.4	34
No	31.7	13	45.5	5	34.6	18
Total	**100.0**	**41**	**100.0**	**11**	**100.0**	**52**

Source: Counterpart Survey Q3.1; Ex-Counterpart Survey Q3.1 (One missing case)

Figure 5: Do these types of skill learning situations exist at JMTI and at your current institute?



Source: Counterpart Survey Q3.2, Ex-Counterpart Survey Q3.2. This is a multiple choice question.

Table 14: Do you face any issues/problems in sustaining the technology, skills and knowledge learned in the Project?

	Counterpart		Ex-Counterpart		Total	
	Percent	n	Percent	n	Percent	n
Yes	41.5	17	41.7	5	41.5	22
No	58.5	24	58.3	7	58.5	31
Total	**100.0**	**41**	**100.0**	**12**	**100.0**	**53**

Source: Counterpart Survey Q3.3; Ex-Counterpart Survey Q3.3

Table 15: Do you think that the technology transfer and skills acquired by you through the Project meets current industrial needs and demand?

	Counterpart		Ex-Counterpart		Total	
	Percent	**n**	**Percent**	**n**	**Percent**	**n**
Yes	92.7	38	100.0	12	94.3	50
No	7.3	3	0.0	0	5.7	3
Total	**100.0**	**41**	**100.0**	**12**	**100.0**	**53**

Source: Counterpart Survey Q4.1; Ex-Counterpart Survey Q4.1

Table 16: Has your work been interrupted or stopped because Project facilities and equipment were not adequately maintained or repairs were lacking?

	Counterpart		Ex-Counterpart		Total	
	Percent	**n**	**Percent**	**n**	**Percent**	**n**
Yes	58.5	24	18.2	2	50	26
No	41.5	17	81.8	9	50	26
Total	**100.0**	**41**	**100.0**	**11**	**100.0**	**52**

Source: Counterpart Survey Q4.2 & Ex-Counterpart Survey Q4.2

Table 17: Are the Project facilities and equipments relevant to your area of expertise fully utilised?

	Percent	n
Yes	82.9	34
No	17.1	7
Total	100.0	41

Source: Counterpart Survey Q4.3

Table 18: In your view, is JMTI investing sufficiently in skill development in you area of expertise?

	Percent	n	Percent	n	Percent	n
Yes	80.5	33	81.8	9	80.8	42
No	19.5	8	18.2	2	19.2	10
Total	**100.0**	**41**	**100.0**	**11**	**100.0**	**52**

Source: Counterpart Survey Q4.4 & Ex-Counterpart Survey Q4.3

Table 19: Have you utilised the reports produced by JICA's experts or other literature reference provided by JICA after project completion?

	Percent	n
Management	100.0	1
Manufacturing	61.5	13
Electronics	75.0	8
Computer	33.3	6
Mechatronics	100.0	13
Average	***73.2***	41

Source: Counterpart Survey Q4.5

Table 20: Have you utilised the reports produced by JICA's experts or other literature reference provided by JICA after project completion?

	Percent	n
Yes	***60.0***	***6***
No	40.0	4
Total	100.0	10

Source: Ex-Counterpart Survey Q4.4

Annex 12B: Survey Findings-Employer Survey

Out of the sixteen Employer Survey sent, six were returned. Four of the companies were in manufacturing business, while another was trading company, and another was training institute. Two of the companies refused to participate in the study. One had deleted the email sent without reading, and another refused because the two graduates that they employed had left their position. To date, the rest had not replied.

Four of the respondent companies are local companies, while the other two are foreign companies. Two of the companies surveyed had previously employed JMTI graduates, while one of the companies had two JMTI trainees undertaking industrial training. A total of eleven JMTI trainees were currently employed in the companies responded.

The employers all agree that JMTI trainees are prepared for their jobs in the company and have sufficient technical skills to perform their jobs. They also agree that they trainees have effective problem solving skills, the ability to work successfully in teams, the ability to adapt their knowledge and skills to different working environments, and strong work ethics. Overall, they were satisfied with the training at JMTI, and would recommend JMTI training as well as graduates to other employers. In addition, the employers suggested that JMTI to offer more skills training programme with new technologies, and also to prolong the industrial training (on-the-job training) to at least four months, so that the trainees would have sufficient time to gain working experience and exposure.

Most of the employers are aware of other training institutions that provide training programmes similar to those offered by JMTI, for example GMI, BMI, CIAST, and ADTEC. The employers rated JMTI's training programme as either the same or better compare to the others. However, only one company had so far sent one of their staff to training programmes at JMTI. Nevertheless, the employers would hire more graduates from JMTI, as they find the graduates have strong technical knowledge and are independent.

Statements	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Overall, individuals that received training provided by JMTI were prepared for their jobs at this company.	-	-	1	5	-
Individuals that received training provided by JMTI have sufficient **technical skills** to perform their jobs.	-	-	3	2	1
Individuals that received training provided by JMTI have effective **problem solving skills**.	-	-	1	5	-
Individuals that received training provided by JMTI have the ability to work successfully in teams.	-	-	2	3	1
Individuals that received training provided by JMTI have the ability to adapt their knowledge and skills to different working environments.	-	-	1	4	1
Individuals that received training provided by JMTI have strong work ethics (i.e. hard working, dependable, cooperative and honest).	-	-	1	3	2

Source: Employer Survey, Q4 to Q9

Annex 13: Report of Survey Interview with JICA Senior Volunteers

The JMTI project was the first Malaysian Vocational Technical training institution assignment for the three Senior Volunteers (SVs) that were interviewed, viz Mr Hideaki Suzuki, Mr Kiyoshi Adachi and Mr Seiki Nagata. The SVs are assigned to different tasks: one for industry relations, one for the mechatronics department, and one for the manufacturing department. However, none of the assignments were tied with any other JICA technical cooperation project. Only one SV is currently teaching the Japanese language. Generally, they are responsible to train other local lecturers / trainers and to prepare instruction manuals.

The main obstacles that the SVs perceived to the successful implementation of vocational training in JMTI are categorised into internal and external. The internal factors include: lack of experience or knowledge of the actual industry; lack of competition among each other, as well as the general attitude of lack of ambition. The external factors include the unclear government policy and strategy on long term human resource development and education; the National Occupational Skill Standards (NOSS) on which the vocational training programmes were relying upon; lack of information and poor English which limits communication, are also impediments.

With regards to JMTI capability and capacity, in terms of infrastructure (facility and equipment), it was commented that the IT is too weak and advanced systems should be implemented. Besides, the idea of depreciation of equipment should be introduced. In terms of human resource, the instructors should be given more training, especially training abroad in order to gain international exposure. Furthermore cooperation and relationship between the instructors and students have yet to be improved. In addition, collaboration and a closer relationship with the industry are necessary. Systematic approach to industry was to be considered, investigation of needs and demands of the industry should be carried out regularly.

Two of the SVs disagreed that the trainees at JMTI had the prerequisite qualifications and were able to follow the curriculum easily. However, they agreed that the trainees were interested in the course they attended, and had the ability to adapt their knowledge and skills. Overall, the trainees at JMTI did not meet the SVs expectations. Three SVs agreed that the technology transfer and skills acquired through the Project by the counterparts met current industrial needs and demand.

To what extent has this Project succeeded in enhancing Senior Volunteers' capabilities in providing services in Malaysia?

		Not Relevant	Low				High
			1	2	3	4	5
i)	Facility and Equipment	1	-	-	-	1	1
ii)	Local counterparts	-	-	-	-	2	1
iii)	Technology Level	-	-	1	-	2	-
iv)	Demand from Industry	-	-	-	-	2	1
v)	Institutional Support	-	-	-	2	1	-
vi)	Development of HR	1	-	-	1	-	1

Source: SV Q7.

Views of Senior Volunteers about the capabilities of the trainees at JMTI.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Overall, trainees at JMTI have the prerequisite qualifications and were able to follow the curriculum easily.	-	2	1	-	-
Trainees at JMTI are interested in the courses they attend.	-	-	1	2	-
Trainees at JMTI are good at applying the theory to practical applications.	-	1	1	1	-
Trainees at JMTI have effective problem solving skills.	-	1	2	-	-
Trainees at JMTI have the ability to work successfully in teams.	-	1	2	-	-
Trainees at JMTI have the ability to adapt their knowledge and skills.	-	-	3	-	-
Trainees at JMTI have strong work ethics (i.e. hard working, dependable, cooperative and honest).	-	2	-	1	-
The trainees at JMTI met or exceeded my expectations.	-	2	1	-	-

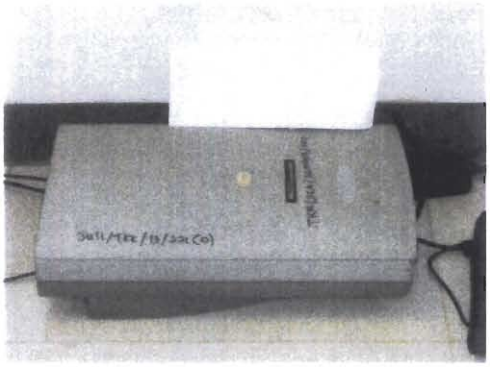
Source: SV Q11.

Pictures referred to in Annex 4A:

Computer Department

C1 – Laser Printer (Canon LBP-810)

C2 – Laser Printer (HP LASERJET 5000)

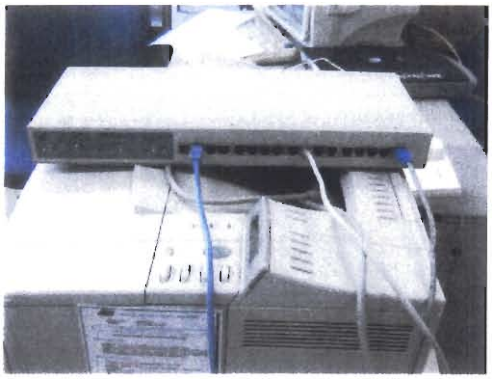


C3 – Scanner (HP 6300C)

C4 - Digital Video Camera (Sharp)

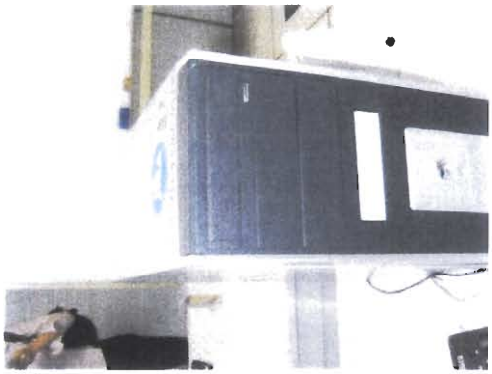
C5 – Firewall (Watchguard Firebox II)

C6 – hub (D-LINK)



C7 – Hub (EDIMAX)

C8 – Scanner (HP SCANJET 6100C)



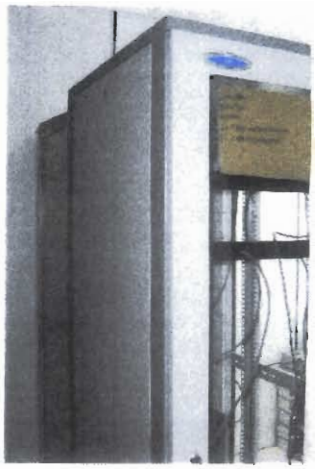
C10 – CPU

C11 – Student Tables

C12 - Magnetic Whiteboard 3X2

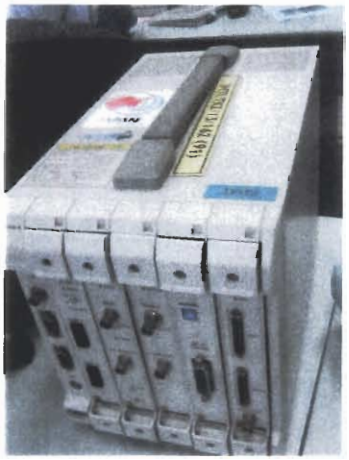
C13 - Portable Screen

C14 - Computer Table

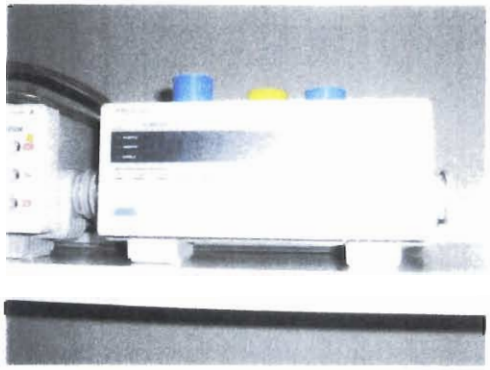


C15 - Equipment Rack 19U

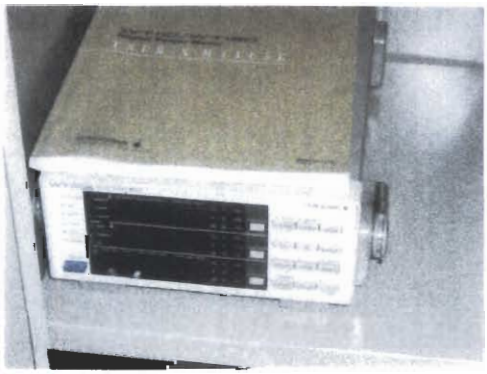
Electronics Department



E1 - Measuring Station (WE400)



E2 - Digital Multimeter (Yokogawa 7555)



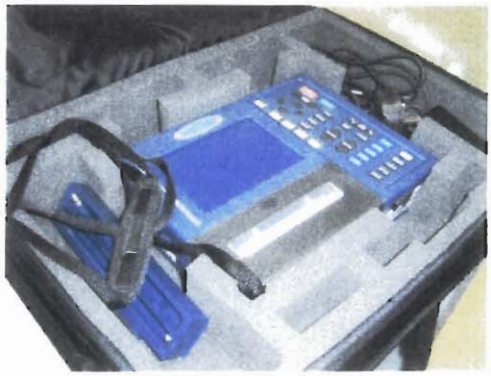
E3 - Digital Power Meter (Yokogawa)

E4 - Handheld Multimeter (Yokogawa 730 01)

E5 - Handy calibrator (Yokogawa CA11)

E9 - Programmable audio processor (Technics SH-D1000)

E6 - Graphics equalizer (Marantz EQ-580)

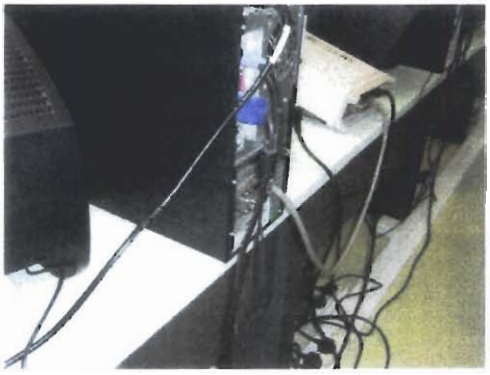


E7 - Handy oscilloscope recorder (Yokogawa OR-100E)

E8 – Computer (IBM 300GL)

E10 – Laser Printer (B/W) (HP 4000N)

E11 – Server (Netfinity 5000)



E13 - GPIB interface card

E14 - Microsoft office 97'

E15 - Windows NT work station

E16 - Kedit for WINDOWS

E17 - LabVIEW Ver 5.0

Manufacturing Department

MFG1 - CNC Turning Center (HITACHI CA23)

MFG2 - CNC Grinding Center (HITACHI SEIKI VKC 45)

MFG3 - Mount Robot (HITACHI MR10)

MFG4 - Fanuc Robot (FANUC M6i)

MFG5 - Automatic Warehouse (HAITECH SEIKO)

MFG6 - Automatic Guided Vehicle (SHINKO - RAKUDA 100)

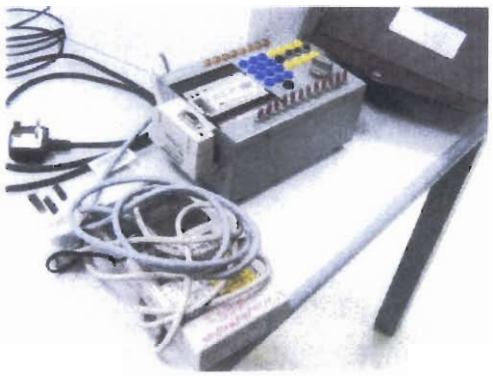
MFG7 - Main Control

MFG8 – Computer

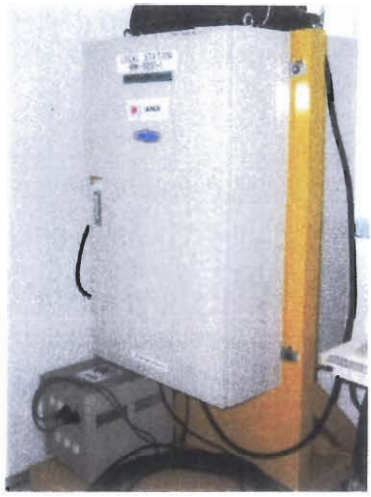
MFG9 - Plus LCD Projector

MFG11 - Computer

Mechatronic Department



MEC1 - PLC Training Kit (CPM1A)



MEC5 - Diagnosis System (Kawatetsu MW-5251-1)

MEC6 - Movement Diagnosis System (Kawatetsu MK-500)

MEC8 – Printer (HP Deskjet 720C)

MEC9 – Air Compressor (Dancomair P5-DC125)

MEC10 - Fanuc M6i with Rail

MEC 11 - Fanuc M6i

MEC12 - Industrial **Robot** (Mitsubishi RV-E2)
MEC 13 - Industrial Robot (Mitsubishi RH-E3H)
MEC 14 - Industrial Robot (Mitsubishi RV-E3J)

Japan-Malaysia Technical Institute (JMTI)