

MINUTES OF THE MEETINGS
BETWEEN
THE JAPANESE MID-TERM EVALUATION TEAM
AND
THE AUTHORITIES CONCERNED
OF
THE REPUBLIC OF INDONESIA
ON
THE JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT FOR STRENGTHENING OF POLYTECHNIC EDUCATION
IN ELECTRIC-RELATED TECHNOLOGY

The Japanese Mid-term Evaluation Team (hereinafter referred to as the Team) organized by the Japan International Cooperation Agency (hereinafter referred to as JICA), headed by Prof. Nobuo FUJII visited the Republic of Indonesia from November 4 to November 16, 2001 for the purpose of conducting mid-term evaluation jointly with the Indonesian authorities concerned on the achievement of the Japanese Technical Cooperation Program regarding the Project for Strengthening of Polytechnic Education in Electric-related Technology (hereinafter referred to as the Project).

During its stay in the Republic of Indonesia, the Team exchanged views and had a series of discussions about the mid-term evaluation of the Project with the Indonesian authorities concerned as well as Indonesian counterparts of the Project.

As a result of discussions, both sides agreed upon the matters referred to in the document attached hereto.

Surabaya, November 15, 2001



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I. Framework of the Project

The Joint Evaluation Team has confirmed that both the Indonesian side and the Japanese side had agreed on the framework of as follows, upon commencement of the Project.

1. Objective of the Project

(1) Overall Goal

Well-trained electric-related polytechnic teachers are provided to polytechnics nationwide and they educate skilled technicians needed for industrial development.

(2) Project Purpose

To provide Electronic Engineering Polytechnic Institute in Surabaya (herein after referred to as EEPIS) with the ability to educate (1) for well qualified electric-related polytechnic teachers in the field of electronic, electrical and telecommunications engineering and (2) for skilled information technology technicians as well.

2. Output of the Project

(1) In-service Diploma 4 courses (teachers training courses/ 1.5 years) for electronic engineering, electrical engineering and telecommunications engineering are established and well managed.

(2) Pre-service Diploma 4 courses (teachers training courses/ 4 years) for electronic engineering, electrical engineering and telecommunications engineering are established and well managed.

(3) Diploma 3 courses for information technology is established and well managed.

(4) In-service Teachers short training courses for electronic engineering, electrical engineering and telecommunication engineering are established and well managed.

(5) The research and teaching capacity of EEPIS teaching staff members is strengthened.

(6) Management system of EEPIS is strengthened.

3. Activities in the Project

- (1) Related activities to the establishment and the management of In-service Diploma 4 courses for electronic engineering, electrical engineering and telecommunications engineering
- (2) Related activities for establishment and management of Pre-service Diploma 4 courses in electronic engineering, electrical engineering and telecommunications engineering
- (3) Related activities for establishment and management of Diploma 3 course in Information Technology
- (4) Related activities for establishment and management of In-service Teachers short training courses in electronic engineering, electrical engineering and telecommunication engineering
- (5) In-country Scholarship Program and the support of research activities to enhance the research and teaching capacity of EEPIS teaching staff members
- (6) Related activities to strengthen the management system of EEPIS

4. Input by the both sides

Both sides have confirmed that the input by each of the two sides was executed by the time of this evaluation, as follows;

(1) Japanese side

1) Long-term experts and short-term experts

Four (4) long-term experts have been dispatched and still in the operation. In addition, six (6) short-term experts were dispatched by the end of Japanese Fiscal Year (JFY) 1999 (October 1999 to March 2000) and thirty (30) short-term experts were dispatched during the JFY 2000 (April 2000 to March 2001). As to the JFY 2001 (April 2001 to March 2002), eleven (11) short-term experts were dispatched by the time of this evaluation. Details of short-term experts are shown in AnnexI-1.

2) Training in Japan and In-country Scholarship Program for counterpart personnel

Three (3) counterpart teachers (C/P) were trained in Japan by the end of JFY 1999. During the JFY2000, six (6) C/Ps were trained. As to the JFY 2001, six (6) C/Ps have been started their training and two (2) more C/Ps will be sent.

As to the In-country Scholarship Program, eight (8) C/PS have started their training in the master course in ITS (Institute of Technology Sepulu Nopember), since the commencement of the Project. Details of this program are shown in Annex I-2.

3) Provision of Equipment

Equipment which are necessary for technical cooperation have been procured and installed as scheduled. Details of the provision are shown in Annex I-3

4) Expenses necessary for the implementation of the Project

Necessary expenses were duly arranged and disbursed as scheduled, by the time of this evaluation. Breakdown is shown in Annex I-4

(2) Indonesian side

1) Assignment of the C/Ps and administrative staff

This Project started with seventy-nine (79) C/Ps and the number of the C/Ps has grown to ninety-two (92) by the time of this evaluation. There had been neither retirement nor resignation among the C/Ps. The list of the C/Ps is shown in Annex I-5.

2) Building and facilities

Building and facilities, which are necessary for the technical cooperation under the Project, have been timely provided for the Project as agreed between the two sides.

3) Expenses necessary for the implementation of the Project

The utility cost and a part of necessary expenses were borne by the EEPIS as Annex I-6 shows the breakdown of these expenses.

II. Joint Evaluation

Project Cycle Management Methodology

This evaluation has been carried out according to the Project Cycle Management Methodology (hereinafter referred to as PCM Methodology) and Project Design Matrix (hereinafter referred to as PDM), with the following understanding and conditions;

1. Five evaluation criteria

All the achievement and performance of this Project have been evaluated according to the following five evaluation criteria.

1) Efficiency

How efficiently have the various inputs been converted into outputs under the Project?

2) Effectiveness

To which extent has the project purpose been achieved, or been expected to be achieved, in respect of the outputs produced by the Project?

3) Impact

If there has been any of intended and unintended, direct and indirect, positive and negative effects, as a result of or in connection with the implementation of the Project, those effects are identified as Impact of the Project.

4) Relevance

Whether are the outputs, project purpose and overall goal still relevant to trends and demands of the society ?

5) Sustainability

Whether are the project benefits likely to continue after the external aid has come to an end?

2. Project Design Matrix for this evaluation

This evaluation has been carried out by referring to the PDM which was formulated in August of 1999.

Also, PDM for evaluation (hereinafter referred to as PDMe) is formulated for the purpose of efficient and accurate execution of the evaluation. The original PDM and PDMe are attached as per Annex III and IV respectively.

III. Evaluation according to five criteria

By using indicators, which had been prescribed in the PDM, the Evaluation Team has executed this evaluation based on the five criteria as follows;

1. Efficiency

(1) Input by Japan

By the time of this evaluation, one (1) chief advisor, one (1) coordinator, two (2) long-term experts and forty-six (46) short-term experts, have been dispatched. Also fifteen (15) C/Ps have been sent to Japan for training and nineteen (19) C/Ps have been provided with an opportunity to enter master course in ITS. Further, equipment which are described in Annex I-3 have been procured and installed in EEPIS.

As to the dispatch of short-term experts, result of the input during the beginning two (2) years shown in Figure 3. Also its plan for the succeeding 3 years in shown in Figure 4.

(2) Input by Indonesian

The C/Ps have been assigned as described in Annex I-5. Director, vice directors and head of each department also have kept their position of administration of the Project. Buildings and facilities necessary for the Project have been provided properly. Expenses necessary for implementation of the Project have been arranged and disbursed properly.

(3) Development of Curriculum and Textbook

The curriculum for D3 course of Information Technology and D4 course of Electrical Engineering, Electronic Engineering and Telecommunication Engineering have been completed. The progress of textbook development at the time of this evaluation is shown in the Figure 1 below;

Fig. 1 Progress in the development of textbooks

Department/Title	Progress	Department/Title	Progress
D3 Information Technology		D4 Telecommunication	
◆ Programming 2	100%	◆ Antenna and Propagation	100%
◆ Logic Circuit 1	100%	◆ EMC	70%
◆ Prac. Logic Circuit 1	100%	◆ Prac. EMC	30%
◆ Logic Circuit 2	100%	◆ Digital Modulation & Coding	70%
◆ Data base	70%	◆ Mobile Communication	20%
◆ Digital Image Processing	50%	D4 Electronics	
◆ Computer Graphics	50%	◆ Digital Signal Processing	100%
◆ Operating System	100%	◆ Prac. Digital Signal Process.,	20%
◆ Programming 1	100%	◆ Biomedical Systems	50%
◆ Prac. Programming 1	100%	◆ Medical Electronics	25%
◆ Data Structure	25%	◆ Prac. Medical Electronics	0%
◆ Object Oriented Programming	5%	D4 Electrical	
◆ E. Circuit and Measurement	100%	◆ Applied Power Electronics 1	100%
◆ Prac. E. Circuit and Measur.,	100%	◆ Applied Power Electronics 2	100%
Common		◆ Electrical Machine	5%
◆ Industrial Management	100%	◆ Electric Drive	25%
◆ Quality Control	100%		

- (4) D4 In-service course, D4 Pre-service course, D3 Information Technology course and Short-term In-service course

Sixteen (16) polytechnic teachers have graduated D4 in-service course of Electric Engineering by the time of this evaluation. The D4 in-service course of Electronic Engineering with thirty-five (35) polytechnic teachers started in September, 2001.

In D3 course of Information Technology, one (1) class with thirty-five (35) students started in September 2000 and another class with thirty-six (36) students started in September 2001 with three (3) years duration.

D4 pre-service course of Electronics Engineering started in October 2001. The short-term in-service courses have been generally conducted as described in the Figure 2 below:

Fig. 2 In-service short training course conducted in EEPIS from Jan 2000 up to middle of Nov 2001

Subject	Financial source	Duration
Training on Laboratory Technician	JICA	Jan 8 to Feb 3, 2001
Laboratory Management	EEDP	Oct 30 to Nov 4, 2000
S1 Plus on Electrical	EEDP/ADB Loan	Sept 26 to Dec 10, 2000
Curriculum Development on IT	EEDP	Oct 3, 2000
Training for Laboratory Technician	JICA	Aug 8 to Sept 4, 2000

Remark: EEDP=Engineering Education Development Project; Budget from Directorate General Higher Education

Fig. 3 Short-term Experts Dispatched

Year	1999	2000	2001
Electrical Department	Curriculum Development	Electric Drive 1	Power Quality 1
		Electric Drive 2	Power Quality 2
		Applied Power Electronics 1	Electric Drive 3
		Applied Power Electronics 2	Electrical Machines 1
			Electrical Machines 2
			Factory Automation & Instrumentation
Electronics Department	Curriculum Development	Medical Electronics 1	Computer Logic Design 1
		Medical Electronics 2	Computer Logic Design 2
		Sensor and Actuator	Mechatronics 1
		Digital Signal Processing 1	Mechatronics 2
		Digital Signal Processing 2	VLSI Design 1
		Digital Signal Processing 3	VLSI Design 2
Telecomm. Department	Curriculum Development	Antenna and Propagation 1	Electromagnetic Compatibility 2
		Antenna and Propagation 2	
		Mobile Comm. 1	
		Mobile Comm. 2	
		Electromagnetic Compatibility 1	
		Digital Modulation and Coding 1	
		Digital Modulation and Coding 2	
Information Technology Department	Curriculum Development	Operating System 1	CPU Architecture 1
	Information Technology	Operating System 2	CPU Architecture 2
		Digital Image Processing 1	Compiler 1
		Digital Image Processing 2	Compiler 2
		Digital Image Processing 3	Object Oriented Programming 1
		Computer Graphics 1	Object Oriented Programming 2
		Computer Graphics 2	Advanced Database 2
		Advanced Database 1	Advanced Database 3
		Information Technology	Computer Network (Data Comm.)
			Modeling and Simulation
			Computer Graphics 3
			Software Engineering
			Human Computer Interaction
Common	Robot Contest Organization	Robot Contest 1	Robot Contest
		Robot Contest 2	Industrial Electronic Seminar 2001
		Industrial Electronics Seminar 2000	Information Technology Education (ITS)
		Quality Control	
No. of Dispatch	6	30	29

Fig. 4 Short-term Expert Dispatch Plan

M/M

JFY	2002		2003		2004		Total
Electrical Department	Magnetic and Electric Device	2.0	Protective and Relaying	2.0			6.0
			SCADA & DCS	2.0			
	(sub-total)	2.0	(sub-total)	4.0	(sub-total)	0.0	
Electronics Department	Embedded Processor	2.0	Real Time System	2.0	Digital Control	2.0	15.0
	Telemetry	2.0	Intelligent Control	2.0	Optical Electronics	2.0	
	Multimedia processing	1.0	Industrial Electronics	2.0			
	(sub-total)	5.0	(sub-total)	6.0	(sub-total)	4.0	
Telecomm. Department	Optical Comm. and network	2.0	Electrical Measure. & Inst.	2.0	Intl Standard and Work Safety	1.0	13.0
	Radio Regulations	2.0	Digital Transmission System	2.0	Comm. Circuits and System	2.0	
			Patent Systems	1.0	Probability and Statistics Process	1.0	
	(sub-total)	4.0	(sub-total)	5.0	(sub-total)	4.0	
Information Technology Department	Database Administration	1.0	Special topics on I.T.	1.0	Computer Vision	1.0	19.0
	Computer Network	2.0	Image Compression	2.0	MIS Strategy Design	1.0	
	Modeling and Simulation	1.0	Multimedia Processing	1.0	Neural Network	1.0	
	Software Engineering	1.0	Information and Coding	1.0			
	Human Computer Interaction	1.0	Design and Analysis of Info. System	1.0			
	Artificial Intelligence	2.0					
	Special topics on I.T.	1.0					
	Curriculum Development	1.0					
(sub-total)	10.0	(sub-total)	6.0	(sub-total)	3.0		
Common	Industrial Management	1.0					3.5
	I..E.S. 2002	0.5	I..E.S. 2003	0.5	I..E.S. 2004	0.5	
	Calibration	1.0					
	(sub-total)	2.5	(sub-total)	0.5	(sub-total)	0.5	
	(total)	23.5	(total)	21.5	(total)	11.5	56.5

(5) Applicant, enrollment, graduates, dropout and repetition

The competitive rates of applicants for enrollment have been confirmed in each of the school year (SY) as the following Figure 5 shows:

Fig. 5 Competitiveness of EEPIS all courses

SY	Applicants	Enrollment	Competitiveness
2001/2002	2053	217	9.46
2000/2001	1888	220	8.58
1999/2000	1239	175	7.08

In particular, the competitive rate of D3 Information Technology course is more than twenty (20) times since its establishment, as described in the Figure 4 below.

Fig. 6 Competitiveness of D3 Information Technology Course

SY	Applicants		Enrollment	Competitiveness
	1 st preference	2 nd preference		
2001/2002	749	467	36	20.8
2000/2001	783	384	35	22.4

Remark: Competitiveness calculated for the 1st preference only.

EEPIS has no repetition system. If any student could pass neither the final test nor remedial test after supplementary lecturing, such a student is requested to leave the school. Although the system is so strict like this, the drop out rate is quite low. For example, in the D3 Information Technology, no drop out has been recorded up to now.

(6) Performance of graduates

The first graduates of in-service training appeared in October 2001, but the evaluation has not been finalized by the time of evaluation.

As to the in-service teacher s short training courses conducted in EEPIS, an evaluation of participants and teachers will be carried out in the every near future. Also evaluation on participants conducted by the polytechnics which hire those participants will be also anticipated.

(7) Academic Qualification of C/P Teachers

Academic qualification of C/Ps has been monitored as described in the Figure 6 below:

Fig.7 Degree holders of teaching staff in EEPIS (as of October, 2001)

Degree	Electronic	Telecom.	Electrical	Information	Total
S1 Bachelor	28	18	17	13	76
S2 Master	3	5	4	2	14
S3 Doctor	1	0	0	1	2
Total	32	23	21	16	92

By the end of the Project, nineteen (19) teachers will be qualified as S2 Master holders additionally by attending the Master course in ITS under the In-country Scholarship Program of this Project.

(8) Presentation of research papers in academic meetings and/or journals

The Joint Evaluation Team has identified the number of research papers accepted in academic meeting and/or journal. The result is described in the Figure 8 below:

Fig. 8 Research paper in academic meetings and/or journals

Fields	SY	1998/99	1999/00	2000/01
Electronic Eng., ◆ Medical Electronic ◆ VLSI Design & Device ◆ Artificial Intelligent		3	1 3	2 2
Electrical Eng., ◆ Electrical Machine ◆ Power Electronics ◆ Protection ◆ Alternative Energy		2 2 1	3 1	4
Information Tech., ◆ Media Engineering ◆ Database ◆ Operating System		2 1	2 1	1 1
Telecommunication Eng., ◆ Electromagnetic Compatibility ◆ Digital Communication ◆ Wireless Communication ◆ Network & Data Communication ◆ Electronics & Communication ◆ Computer Network		1	2 2	4 2 1
Common ◆ Robot and Mechantronic ◆ Quality Control & Automatic Industrial Inspection ◆ Control System			1 1	1 2 1
Total		12	17(2)	23(2)

() : International meetings and/or journals

The number of research paper accepted by academic meetings and/or journals is not

large so far but increasing. It has been observed that EEPIS intends to enhance their ability of research from national level to international level. As a result of this endeavor, four (4) research papers during School Year (SY)1999/2000 and 2000/2001 have been accepted by international meeting and/or journals. After this the end of evaluation; twenty-four (24) research papers have been accepted by the end of SY2001/2002 including two (2) international level papers.

(9) Academic achievement and understanding of the subjects of the participants

The academic achievement and understanding of the subjects of the participants are measured in two (2) quiz and one (1) final test to be given in each semester. Assessment are conducted according to the grading with 7(seven) ranks.

(10) Job Arrangement System

The number of JAS users was one hundred-nine (109) and one hundred-thirty-one (131) companies in the year 2000 and 2001 respectively. By utilizing this JAS system, eighty (80) graduates have got commitment for employment from eleven (11) companies before their graduation in 2001, as described in Figure 9. below.

Fig. 9 Employment through JAS

No.	Year	1996	1997	1998	1999	2000	2001
No. of companies accepted graduates		23	8	17	7	9	11
No. of graduates accepted by the companies		81	45	110	36	81	80

It has also been noticed that the Project has a plan to further enhance the function of the JAS system from the JFY2002.

(11) Maintenance and repair of equipment

It has been noticed that the function of the center for maintenance and repair (CMR) will be transferred to the Training Center in December 2001, and the Training Center will start its function from January 2002. In line with this, the Project is planning to restructure the organization for maintenance and repair, to increase the number of staff, and to enhance the ability of the staff.

(12) Networking of Polytechnics

It has been confirmed that EEPIS has participated in the annual meetings of Polytechnics, which are held by DGHE every year and all the polytechnics join, as one of the activities to organize a information network among the polytechnics in Indonesia.

Also, EEPIS organized a National Meeting in association with DGHE in order to play a role of model polytechnic for others.

(13) Self-generated budget in EEPIS budget

The self-generated budget has reached about 25 to 30% of EEPIS s total budget. The main income sources in addition to entrance fee and tuition fee are training technical personnel of the private companies, production for teaching materials from educational institutions, and software development from private companies. Figure 10. below shows the increase of the self-generated budget in EEPIS for recent years.

**Fig. 10 Self-generated income in EEPIS
(excluding the entrance fee and tuition fee)**

Year	Amount(Rp.)
1997	13,000,000
1998	187,500,000
1999	883,702,500
2000	1,237,027,250
2001	3,067,392,710 +US\$189,297

Conclusion on Efficiency

The Joint Evaluation Team has found that the input under the Project are adequately converted into the output. In particular, the equipment provided under the Project are properly utilized in each laboratory of EEPIS so far.

2. Effectiveness

The Joint Evaluation Team has considered the following facts for the evaluation of Effectiveness of the Project;

(1) The number of graduates of Diploma 4 courses

In the Project, sixteen (16) polytechnic teachers have finished the D4 in-service course of Electrical engineering by the time of this evaluation.

(2) Other polytechnics on the performance of teachers who have been trained in Diploma 4 courses and short courses in EEPIS

The result of evaluation has not yet been available because the above-mentioned sixteen (16) teachers have just finished their training in the in-service course.

(3) The number of graduates who successfully find jobs.

Because D3 Information Technology course started in September 2000 and the first graduates are scheduled in 2003. This fact cannot be obtained at the time of this evaluation.

(4) Evaluation of graduates by employers and level of satisfaction of graduates

Evaluation survey will be conducted after the graduation, but the follow-up survey for past graduates and employers was conducted in March 25, 2000. According to the result of this survey, the enterprises which employed the past graduates from D3 courses of EEPIS through JAS have highly evaluated the ability of graduates of EEPIS and tend to continue recruitment among the graduates of EEPIS.

Conclusion on Effectiveness

At the time of evaluation, the Joint Evaluation Team could not identify clear-cut effect brought by the Project. This is simply because only two years has passed since the Project started and almost all of activities and input have not been completed. However, the Team has not identified any facts, which may hamper the project implementation or appearance of the effectiveness.

3. Impact

(1) Establishment of in-service training course for technical high school teachers

The D4 in-service training of IT subjects in Telecommunication Engineering for the teachers of technical high school has been launched in May 2001 and been maintained by C/Ps teachers. This is not categorized as activities under the Project but initiated solely by the C/Ps who are inspired by the Project.

(2) Robot Contest

EEPIS won the first prize in the world Robot Contest 2001, held in Japan, competing with many universities over the world. This encouraged people in Indonesia and raised the public reputation on EEPIS and its students.

Conclusion of Impacts

This Project has provided enough magnitude of impact to the society in Indonesia, even considering the fact that the Project is still on the stage of its mid-term. Further, EEPIS s involvement in the Robot Contest gave strong impact on not only the society of Indonesia but

also other developing countries. For example, JICA has started considering to dispatch senior volunteers for management of the robot contest to several countries other than Indonesia where many universities and colleges are inspired by EEPIS s victory.

3. Relevance

As to the Relevance of the Project, the Joint Evaluation Team has extended its attention to the following facts:

(1) Polytechnic Development

The Polytechnic Development Plan to establish 195 nationwide polytechnics and educate 260,000 students in engineering field has been kept since 1996, in spite of the economic crisis which occurred in the late 90 s. This policy for development of polytechnics would be further kept in the crucial components, considering new trends in Indonesian society such as promotion of decentralization and autonomy of institutions involved in education. Further, the role of private polytechnics is also taken into consideration to materialize the plan.

(2) Demands for graduates

Economic crisis in the late 90 seriously affected the industrial society of Indonesia and the demand for the middle level technicians dramatically declined after that. However, private and public sectors in the field of electronics recovered shortly after the crisis and demand for middle level technicians as their crucial work force. As to the graduates from EEPIS, many enterprises and institutions are quite active in the recruitment of them.

Conclusion on Relevance

The Joint Evaluation Team has recognized that the government of Indonesia keeps its policy for increasing the number of polytechnics and institutes in the field of electronics and finally acknowledged the relevance of this Project.

4. Sustainability

The Joint Evaluation Team has considered the following facts to evaluate the sustainability of the Project:

(1) Establishment of new courses

The preparatory work for establishment of new D4 courses of three departments and D3 course of Information Technology has already started as scheduled.

(2) Assignment of C/Ps

No teaching staff has resigned or retired since the establishment of EEPIS in 1987. The number of teaching staff in EEPIS has been increasing in response to the progress of the preparatory work for this Project and the scale of budget of EEPIS has been expanding. The share of self-generating budget in the total budget of EEPIS may be increased furthermore in the future by conducting new income generation activities in response to the requirements of the private and public sector.

(3) Contribution by the establishment of D4 courses and D3 course

The establishment of D4 pre-service courses under the Project may contribute not only to the development of the 195 polytechnics but also to the development of new courses in existing polytechnics.

In addition, graduates of D3 course of Information Technology of EEPIS will be also demanded by private sectors as an qualified work force in the field of electronics.

Conclusion on Sustainability

Considering these facts, the team concluded that the sustainability of the Project can be identified in this mid-term evaluation.

III. Recommendations and Lessons Learned

The Joint Evaluation Team would like to make the following recommendation for efficient implementation of the Project;

(1) Monitoring

Monitoring on technology transfer made by Japanese experts and on the results of C/P s training in Japan should be further promoted.

(2) Relationship with industrial society

It is recommendable to enhance the existing relationship with the industrial society furthermore, to update the contents of the courses and also equipment.

(3) PCM Workshop

It is recommendable to organize a seminar of PCM methodology for those who are newly involved in the Project, because this is a crucial methodology for project implementation and evaluation.

(4) Ideal ratio between the number of teachers and the number of students

The team has identified an ideal ratio between teachers and students in EEPIS and highly recommend to maintain this ratio.

(5) Maintenance and repair of equipment

Activities for maintenance, repair and calibration should be enhanced furthermore to maintain not only the existing equipment, but also facilities including LAN system, software and new computer network.

(6) Further enhancement of the ties between the two sides

The C/P teachers should enhance communication with Japanese resource persons by utilizing sophisticated method for communication such as internet, e-mail and so on.

III . Necessity of adjustment of the Project and Recommendation

1. Items to be discussed
2. Items to be adjusted and recommendation

ANNEX I-1

Summary of Input(Japan side-1)

Calendar Year		1999			2000												2001												2002			
Month		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year		1999				2000												2001												2002		
Indonesian Fiscal Year		1999				2000												2001												2002		
Indonesian Academic Year		1999/2000						2000/2001						2001/2002						2002												
Input of experts	Planned	Long-term experts: 1 chief advisor, 1 coordinator and 1 expert (information technology) Short-term experts: 20 experts/year (electric engineering, electronic engineering, telecommunication engineering, information technology)																														
	Implemented	<p>Chief Adviser (1999.8.3~2002.10.1)</p> <p>Coordinator (1999.10.1~2000.9.31)</p> <p>Supporting robot contest Short-term Expert/Robot engineering (1999.11.01~99.11.05)</p> <p>D3 and D4 curriculum development Short-term Expert/ telecommunication Engineering (2000.3.11~3.26)</p> <p>ST Experts/ 2 Electrical engineering and 1 Information technology (2000.3.18~4.01)</p> <p>Information technology(2000.4.8~7.6) including selection of equipment</p> <p>Total : 6 short-term experts</p>						<p>1 long-term Expert/Information technology(2000.4.10~2002.4.9)</p> <p>Coordinator (2000.9.25~2002.9.24)</p> <p>Short-term Experts <u>Development of curriculum and guidance</u> <u>Information Technology</u> Digital image processing(2000.7.20~8.6) Operating system(2000.7.22~8.5) Information technology(2000.10.23~12.8) Digital image processing(2000.12.10~12.17) Advanced data base(2001.3.11~3.31) Computer graphics(2001.3.18~3.31) Computer graphics(2001.2.25~3.7) Operating system(2001.3.18~3.30) Digital image processing(2001.2.11~2.25) <u>Electronics Engineering</u> Digital signal processing(2000.8.2~8.15) Medical electronic engineering(2000.8.9~8.14) Sensor Actuator(2000.8.19~8.28) Digital signal processing(2000.12.16~12.23) Medical electronics engineering(2001.1.4~1.24) Digital signal processing(2001.3.23~4.5) <u>Telecommunication Technology</u> Antenna and propagation(2000.8.5~8.20) Mobile communication(2000.8.14~8.26) Digital modulation(2000.10.22~11.4) Electromagnetic environmental engineering(2000.10.13~10.23) Antenna and propagation(2001.3.5~3.18) Digital Radiotelephony-Quality control(2001.4.8~7.8) Mobile communication(2001.3.4~3.10) Digital Modulation(2001.4.1~4.14) <u>Electrical Engineering</u> Electric drive(2000.10.3~10.13) Applied power electronics(2000.11.27~12.20) Applied power electronics(2001.3.16~3.22) Electric drive(2001.4.8~4.17) <u>Seminar</u> Industrial electronic seminar(2000.10.16~10.21) <u>Supporting robot contest</u> 2 Robot contest(2000.10.31~11.05) Total : 30 short-term experts</p>												<p>1 long-term Expert/Electronic and Electric Engineering Education (2001.10.18~2003.10.17)</p> <p>Short-term Experts <u>Development teaching material and guidance</u> <u>Electrical Engineering</u> Electrical machines(2001.8.12~9.12) <u>Electronic Engineering</u> Mechatronics(2001.8.19~8.31) VLSI Design(2001.9.1~9.9) <u>Information Technology</u> Compiler(2001.8.12~8.26) Object oriented programming(2001.8.19~9.2) Object oriented programming(2001.9.20~10.6) Advanced database(2001.8.12~8.29) Computer graphics(2001.8.19~8.31) <u>Project formation of ITS IT faculty establishment</u> Information technology(2001.5.13~7.12)</p> <p>Scheduled short-term experts <u>Electrical Engineering</u> Power quality, Electric drive, Electrical machine Factory automation and instrumentation <u>Electronics Engineering</u> Computer logic design, VLSI Design <u>Telecommunication Engineering</u> Electromagnetic Compatibility <u>Information Technology</u> CPU architecture, Compiler, Computer network, Modeling and simulation, Software engineering, Human computer interaction <u>Seminar</u> Industrial Electronics <u>Supporting robot contest</u> Robot contest advisor</p>												

ANNEX I-2

Input Summary(Japan side-2-1)

Calendar Year		1999				2000												2001												2002		
Month		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year		1999				2000												2001												2002		
Indonesian Fiscal Year		1999				2000												2001												2002		
Indonesian Academic Year		1999/2000				2000/2001												2001/2002												2002		
Input of training of C/P in Japan	Planned	8 C/Ps per year (Electrical engineering, electronic engineering, telecommunication engineering and information technology)																														
	Implemented	Short term training Telecommunication engineering/Tokyo Institute of Technology - 1 C/P Information technology /Tokyo Institute of Technology - 2 C/Ps Total: 3 C/Ps				Short term training Electronic engineering/Tokyo Institute of Technology - 1 C/P Electronic engineering/Tsukuba University - 1 C/P Information technology/Ibaragi College of Technology - 1 C/P Information technology/Nara College of Technology - 1 C/P Electrical engineering/Osaka University - 1 C/P Electrical engineering/Tokyo Institute of Technology - 1 C/P Long term training Electronic engineering/Tokyo Institute of Technology - 1 C/P (3 years) Total: 7 C/Ps												Short-term training (Implemented) Electronic engineering/Chiba University- 1 C/P Electronic engineering/Nagaoka University - 1 C/P Electronic engineering/Nagaoka College of Technology- 1 C/P Electrical engineering/Kyushu University - 1 C/P Electrical engineering/Tokyo Institute of Technology - 1 C/P Telecommunication engineering/Tokyo Institute of Technology- 1 C/P (Scheduled) Electric engineering/unknown- 1 C/P Electronic engineering/unknown- 1 C/P Total : 8 C/Ps including planning														

Input Summary (Japan side-2-2)

Calendar Year		1999				2000												2001												2002		
Month		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year		1999				2000												2001												2002		
Indonesian Fiscal Year		1999				2000												2001												2002		
Indonesian Academic Year		1999/2000				2000/2001												2001/2002												2002		
Input of master course training in Indonesia	Planned	18 C/Ps by 2004 (Additional 9 C/Ps by 2004 - Dec., 2000 request/March, 2001 accepted by Tokyo)																														
	Implemented	Telecommunication/ITS - 1 C/P Total : 1 C/P				Electronic/ITS-3 C/P Electric/ITS-1 C/P Telecommunication/ITS-3 C/P Total : 7 C/Ps												Electronic/ITS-2C/P Electric/ITS-3C/Ps Telecommunication/ITS-2 C/Ps Information/ITS-4 C/Ps Total : 11 C/Ps														

ANNEX I-3

Input Summary (Japan side-3)

Calendar Year	1999			2000												2001												2002			
Month	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year	1999			2000												2001															
Indonesian Fiscal Year	1999			2000												2001												2002			
Indonesian Academic Year	1999/2000												2000/2001												2001/2002						
Input of Equipment	Planned	Computer, Measuring instrument for education, experimental equipment, vehicle etc., Approx., 200 million Yen Electronic engineering—Subjects (Program logic control, auto control system) , Electrical engineering—Subjects (Electrical measuring, electrical circuit) , Communication engineering—Subjects (Digital communication, digital modification and wiring) , Information technology—Subjects (Microprocessor and interface, basic electronics, analog and digital)																													
	Implemented	<p><u>Carrying equipment</u></p> <p>1 set of personal computer 1 unit of LCD projector 1 unit of digital camera</p> <p><u>Provided equipment</u></p> <p>2 units of copying machine 2 units of portable copying machine 1 set of personal computer 1 unit of vehicle 1 set of personal computer 12 units of single phase wattmeter 12 units of 3 phase wattmeter 2 units of Magnetic circuit meter 6 units of Earth meter 1 unit of FFT dynamic signal analyzer 20 units of digital multi-meter 2 units of digital tacometer 6 units of Oscilloscope 6 units of portable frequency meter 3 units of portable Power factor meter 1 unit of storage oscilloscope 6 units of digital clamp meter 1 set of vector network analyzer</p> <p>Carrying equipment ¥1,711,600 Provided equipment US\$111,324+ ¥611,800+ 4,500,000Rp. +US\$76,925(Vector network analyzer installed in 2000)</p>	<p><u>Carrying Equipment</u></p> <p>3 units of desktop PC 2 sets of wireless LAN 1 unit of digital video camcorder, and software etc.,</p> <p><u>Provided equipment</u></p> <p>70 units of desktop PC 1 unit of notebook PC 2 units of PC router Software (MS-Office 2000 Pro, Visual Studio 6.0, Borland Delphi Ver 5.0, Linux Redhat 6.2, Sunstar Office 5.1 for Linux, Oracle 81 Enterprise Edition for Linux9 1 unit of PC server, 1 unit of Linux server 1 unit of graphic workstation Software (Maya Complete 3.0 for IRIX 6.5, Matlab 5.3 for IRIX 6.5, Matlab 5.3 for Windows 2000) 2 units of UNIX workstation Software (Sun Visual Workshop C) 6 units of dotmatrix Printer 2 units of laser printer 2 units of router 4 units of UPS 8 units of voltage regulator 6 units switchboard hub 2 sets of ethernet transceiver 4 units of UTP cable 2 units of AUJ lan cable 2 units of RJ-45 connector 1 unit of LAN cable tester 1 unit of LCD projector 5 units of embedded micro processor module Software (Antivirus Norton)) LAN network Experimental apparatus (6 kinds)</p> <p>Carrying equipment ¥2,558,314 Provided equipment US\$356,300.00+US\$275,000 approx.,(LAN network and experimental apparatus of 6 kinds installed in 2001)</p>	<p><u>Carrying Equipment</u></p> <p>2 unit of dipole antenna 2 units of horn antenna 2 units of video tape teaching material 5 units of PC software(OS)</p> <p>Carrying equipment US\$19,312</p>																											

	Implemented	<u>Third Quarter</u>	<u>First Quarter</u>	<u>First Quarter</u>
		General local expense (constant expense) 78,375,183Rp.	General local expense (constant expense) 93,172,900Rp.	
		General local expense(Event expense) 131,242,293Rp.	Technology exchange expense 86,146,700Rp.	<u>Second Quarter</u>
		<u>Fourth Quarter</u>	<u>Second Quarter</u>	
		General local expense (constant expense) 291,547,900Rp.	General local expense (constant expense) 96,898,425Rp.	<u>Third Quarter</u>
		General local expense(Event expense) 1,460,000Rp.	General local expense (seminar expense) 79,980,600Rp.	<u>Fourth Quarter</u>
		<u>Total</u>	Training expense of skilled technicians 83,496,400Rp.	<u>Total</u>
		General local expense (constant expense) 369,923,083Rp.	Area network strengthening expense(Research activity strengthening) 161,000,000Rp.	<u>Grand Total Rp.</u>
		General local expense(Event expense) 132,702,293Rp.	<u>Third Quarter</u>	
			General local expense (constant expense) 120,295,085Rp.	
	Training expense of skilled technicians 90,000,000Rp.			
	<u>Fourth Quarter</u>			
	General local expense (constant expense) 231,133,590Rp.			
	Training expense of skilled technicians 6,031,600Rp.			
	Area network strengthening expense (International seminar) 66,602,350Rp.			
	<u>Total</u>			
	General local expense (constant expense) 541,500,000Rp.			
	General local expense (seminar expense) 79,980,600			
	Technology exchange expense 86,146,700Rp.			
	Training expense of skilled technicians 179,528,000Rp..			
	Area network strengthening expense (international seminar) 66,602,350Rp.			
	Area network strengthening expense(Research activity strengthening) 161,000,000Rp.			
	<u>Grand Total 1,114,757,650Rp.</u>			

ANNEX I-4

Input Summary(Japan side-4)

Calendar Year	1999				2000								2001								2002										
Month	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year	1999				2000								2001								2001										
Indonesian Fiscal Year	1999				2000								2001								2002										
Indonesian Academic Year	1999/2000				2000/2001								2001/2002								2001/2002										
Input of Local Cost	Planned	<u>Third Quarter</u> General local expense (constant expense) 204,600,000Rp. General local expense(Event expense) 114,258,000Rp. <u>Fourth Quarter</u> General local expense (constant expense) 180,500,000Rp. <u>Total</u> General local expense (constant expense) 385,100,000Rp. General local expense (constant expense) 114,258,000Rp.				<u>First Quarter</u> General local expense (constant expense) 132,900,000Rp. Technology exchange expense 86,445,000Rp. Training expense of skilled technicians 89,764,000Rp. Area network strengthening expense(Research activity strengthening) 96,000,000Rp. <u>Second Quarter</u> General local expense (constant expense) 132,900,000Rp. <u>Third Quarter</u> General local expense (constant expense) 143,900,000Rp. General local expense (seminar expense) 79,980,600 Training expense of skilled technicians 89,764,000Rp. Area network strengthening expense (participation expense of academic meeting) 53,319,400Rp. Area network strengthening expense (international seminar) 66,700,000Rp. Area network strengthening expense(Research activity strengthening) 96,000,000Rp. <u>Fourth Quarter</u> General local expense (constant expense) 131,800,000Rp. <u>Total</u> General local expense (constant expense) 541,500,000Rp. General local expense (seminar expense) 79,980,600 Technology exchange expense 86,445,500Rp. Training expense of skilled technicians 179,528,000Rp. Area network strengthening expense (participation expense of academic meeting) 53,319,400Rp. Area network strengthening expense (international seminar) 66,700,000Rp. Area network strengthening expense(Research activity strengthening) 192,000,000Rp. <u>Grand total 1,199,473,000Rp.</u> Building construction of information Technology dept., by infrastructure development fund of ¥36,000,000								<u>First Quarter</u> General local expense (constant expense) 124,269,000Rp. General local expense (seminar expense) 99,000,000Rp. <u>Second Quarter</u> General local expense (constant expense) 137,000,000Rp. Training expense of skilled technicians 105,000,000Rp. Area network strengthening expense (Domestic popularization) 68,000,000Rp. Area network strengthening expense(Research activity strengthening) 288,000,000Rp. Wide area technical cooperation promotion expense 176,000,000Rp. <u>Third Quarter</u> General local expense (constant expense) 137,000,000Rp. General local expense (seminar expense) 79,980,600 Area network strengthening expense (international seminar) 71,000,000Rp. Area network strengthening expense (participation expense of academic meeting) 38,000,000Rp. Area network strengthening expense (Domestic popularization) 15,000,000Rp. <u>Fourth Quarter</u> General local expense (constant expense) 137,000,000Rp. Training expense of skilled technicians 105,000,000Rp. Area network strengthening expense (Domestic popularization) 15,000,000Rp. Area network strengthening expense(Research activity strengthening) 288,000,000Rp. <u>Total</u> General local expense (constant expense) 535,269,000Rp. General local expense (seminar expense) 99,000,000Rp. Training expense of skilled technicians 210,000,000Rp. Area network strengthening expense (international seminar) 71,000,000Rp. Area network strengthening expense (participation expense of academic meeting) 38,000,000Rp. Area network strengthening expense (Domestic popularization) 98,000,000Rp. Area network strengthening expense(Research activity strengthening) 576,000,000Rp. Wide area technical cooperation promotion expense 176,000,000Rp. <u>Grand Total 1,803,269,000Rp.</u>																	

ANNEX I-5

Input Summary (Indonesian side-1-1)

Calendar Year	1999				2000												2001												2002		
Month	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year	1999				2000												2001														
Indonesian Fiscal Year	1999				2000												2001												2002		
Indonesian Academic Year	1999/2000								2000/2001								2001/2002														
Input of C/P	Planned		Assignment of C/Ps Assignment of Administrative personnel																												
	Implented																														
Name of Counterpart	JFY 99								JFY 00								JFY 01														
ELECTRONICS																															
1																															
2																															
3																															
4																															
5																															
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25																															
26																															
27																															
28																															
29																															

30			
31			
32			
34		Transferred to IT Dept	
35		Transferred to IT Dept	
36			Transferred to IT Dept
SUBTOTAL	30	29	32
ELECTRICAL			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
SUBTOTAL	20	20	21
TELECOMMUNICATION			
1			
2			
3			
4			
5			
6			
7			
8			
9			

10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
SUB TOTAL	22	22	23
INFORMATION TECH			
1			
2			
3			
4			
5			
6			
7			
8			
9	From Electncs		
10	From Electncs		
11			
12		From Electncs	
13			
14			
15			
16			
SUB TOTAL	7	11	16
GRAND TOTAL	79	82	92

ANNEX I-6

Input Summary (Indonesian side-2)

Calendar Year	1999				2000												2001												2002		
Month	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year	1999				2000												2001														
Indonesian Fiscal Year	1999				2000												2001												2002		
Indonesian Academic Year	1999/2000								2000/2001								2001/2002														
Input of Facilities	Planned	Land, building and facilities needed for the Project																													
	Implemented	2 rooms for experts Furniture (desk, chair and cabinet) Utility cost (electricity and water)								1 room added for short-term experts																					

ANNEX I-7

Input Summary (Indonesian side-4)

Calendar Year	1999				2000												2001												2002		
Month	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Japanese Fiscal Year	1999				2000												2001												2002		
Indonesian Fiscal Year	1999				2000												2001												2002		
Indonesian Academic Year	1999/2000				2000/2001												2001/2002												2002		
Input of local cost necessary for the implementation of the Project	Planned																														
	implemented	No budget allocated due to yearly budget system.				Due to modification of fiscal year in 2000, the expended amount from April to December in 2001 is 130,000,000Rp. mainly used for office consumables, travel expenses and development of textbooks and teaching materials. Other expenditure for the project are expended from the general budget. Additionally approx. 300,000,000Rp. expended for purchasing furniture and equipment for D3 IT building constructed by JICA budget.												Approximately 3,125,000,000Rp. allocated, including construction cost of 1,800,000,000Rp. for training center.													

ANNEX-II

Plan of Operation for whole period

Project : Strengthening of Polytechnic Education in Electric - related Technology

Project Purpose : To provide EEPIs with the ability to educate (1) for well qualified electric-related polytechnic teachers in the field of electronic, electrical and telecommunications engineering and (2) for skilled information technology technicians as well.

OUTPUT	ACTIVITIES	TARGET	1999		2000				2001				2002				2003				2004		RESPONSIBLE PERSON IN PROJECT TEAM	INPUT*	REMARKS	
			III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II				
1. In-service Diploma 4 courses are established and well-managed.	1.1. Assign counterpart personnel for the courses.	Ability improvement for specific subject	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Director	CP		
	1.2. Conduct surveys on the needs and situation of the electric-	Data of market demand																				Director	CP, Exp.			
	1.3. Develop curriculum.	Curriculum, Syllabus																				Vice Director I	CP, Exp.			
	1.4. Develop and compile textbooks and subject contents.	Textbooks			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Vice Director I	CP, Exp.		
	1.5. Install necessary equipment.	Lab. Functioning																				Head of Department	Equipment			
	1.6. Develop teaching materials and handout for teachers.	Module, Manuals & Handout																				Head of Department	CP, Exp.			
	1.7. Make course implementation plans.	Course plan																				H.of Academic Ad.	CP			
	1.8. Conduct courses.				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	H.of Academic Ad.	CP, Exp.		
	1.9. Develop a method to evaluate achievement and understanding of	Evaluation method																				Head of Research & Comm. Service	CP, Exp.			
	1.10. Evaluate achievement and understanding of the students.	Data of achievement and suggestion																				Head of Academic Ad	CP, Exp.			
	1.11. Review the implementation plans and contents of the courses.	Curriculum, Mapping & Analysis																				Head of Research & Comm. Service	CP, Exp.			
	1.12. Improve the implementation plans and content of the courses.	Revised curriculum																				Vice Director I	CP, Exp.			
2. Pre-service Diploma 4 courses are established and well-managed.	2.1. Assign counterpart personnel for the courses.	Ability improvement for specific subject	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Director	CP			
	2.2. Conduct surveys on the needs and situation of electric-	Data of market demand																				Director	CP, Exp.			
	2.3. Develop curriculum.	Curriculum, Syllabus																				Vice Director I	CP, Exp.			
	2.4. Develop and compile textbooks and subject contents.	Text books			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Vice Director I	CP, Exp.		
	2.5. Install necessary equipment.	Lab. Functioning																				Head of Department	Equipment			
	2.6. Develop teaching materials and handout for teachers.	Module, Manuals & Handout																				Head of Department	CP, Exp.			
	2.7. Make course implementation plans.	Course plan																				H.of Academic Ad.	CP, Exp.			
	2.8. Conduct courses.				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	H.of Academic Ad.	CP		
	2.9. Develop a method to evaluate achievement and understanding of	Evaluation Method																				Head of Research & Comm. Service	CP, Exp.			
	2.10. Evaluate achievement and understanding of the students.	Data of achievement and suggestion																				Head of Research & Comm. Service	CP, Exp.			
	2.11. Review the implementation plans and contents of the courses.	Curriculum, Mapping & Analysis																				Head of Research & Comm. Service	CP, Exp.			
	2.12. Improve the implementation plans and content of the courses.	Revised curriculum																				H.of Academic Ad.	CP, Exp.			

OUTPUT	ACTIVITIES	TARGET																					RESPONSIBLE PERSON IN PROJECT TEAM	INPUT*	REMARKS
			1999		2000				2001				2002				2003				2004				
			III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV					
5. The research and teaching capacity of EEPIS staff members is strengthened.	5.1. Implement an in-country master's degree study program for	30 master degree																			Vice Director I	CP			
	5.2. Support research activities of EEPIS counterpart personnel.	Capability to compete in National Research/academic																			Head of Research & Comm. Service	CP, Exp.			
	5.3. Install necessary equipment.	Support research activity																			Head of Research & Comm. Service	Equipment			
6. Management system of EEPIS is strengthened	6.1. Improve the existing Job Arrangement system.	Reduce waiting time & Readiness to glob. Market																			Vice Director III	CP, Exp.			
	6.2. Develop the network among electric-related polytechnics.	Joint activity																			Vice Director IV	CP, Exp.			
	6.3. Improve revenue generating programs for strengthening	Center of industrial service establishment																			Vice Director IV	CP, Exp.			
	6.4. Make a plan to improve equipment and facilities.	Improvement plan																			Vice Director II	CP			
	6.5. Procure and install necessary equipment.	MIS established																			Vice Director II	CP, Exp.	equipment proposed to JICA		
	6.6. Strengthen the procurement function of EEPIS.	Matching request & procurement																			Head of Spare Parts Center	CP, Exp.			
	6.7. Conduct training to operate and maintain equipment.	Skilled-technicians																			Vice Director IV	CP, Exp.			
	6.8. Improve maintenance and repair system for equipment.	MRC manuals & National accreditation standard																			Head of Maintenance and	CP, Exp., Equipment			
	6.9. Conduct survey of Engineering Competence Based Standard in Electric-related field development.	Draft of Engineering Competence based Standard in Electric related Engineering																			Director	CP, Exp.			

* Person, equipment and other Input necessary for implementing the activities
Vice Director I : Academic Affairs, II : Administration & Finance, III : Students Affairs, IV : External Cooperation Affairs

OUTPUT	ACTIVITIES	TARGET	1999		2000				2001				2002				2003				2004		RESPONSIBLE PERSON IN PROJECT TEAM	INPUT*	REMARKS
			III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II			
				2.13. Set up benchmarking and quality assurance	Quality standard																				
3. Diploma 3 course for information Technology is established and well managed.	3.1. Assign counterpart personnel for the courses.	Ability improvement for specific subject																					Director	CP	
	3.2. Conduct surveys on the needs and requirement for	Data of market demand																					Head of IT Department	CP, Exp.	
	3.3. Develop curriculum.	Curriculum, Syllabus																					Head of IT Department	CP, Exp.	
	3.4. Develop and compile textbooks and subject contents.	Textbooks																					Head of IT Department	CP, Exp.	
	3.5. Install necessary equipment	Lab. Functioning																					Head of IT Department	Equipment	
	3.6. Develop teaching materials and handout for teachers.	Module Manual																					Head of IT Department	CP, Exp.	
	3.7. Make course implementation plans.	Course plan																					H. of Academic Ad.	CP	
	3.8. Conduct courses																						H. of Academic Ad.	CP	
	3.9. Develop a method to evaluate achievement and understanding of	Evaluation method																					Head of Research & Comm. Service	CP, Exp.	
	3.10. Evaluate achievement and understanding of the students.	Data of achievement and suggestion																					Head of Research & Comm. Service	CP, Exp.	
	3.11. Review the implementation plans and contents of the courses.	Curriculum, Mapping & Analysis																					Head of Research & Comm. Service	CP, Exp.	
	3.12. Improve the implementation plans and content of the courses.	Revised curriculum																					Vice Director I	CP, Exp.	After 1 st graduation
	3.13. Set up benchmarking and quality assurance	Quality National Accreditation standard																					Director	CP, Exp.	
	3.14. Develop the Job Arrangement system for Information Technology	Recruited before graduation																					Vice Director III	CP, Exp.	
4. In-service Teachers' short training courses for electronic, electric, and telecommunications engineering are established and well-managed.	4.1. Conduct surveys on the needs and situation for in-service	Data of training demand																				Director	CP, Exp.		
	4.2. Develop curriculum.	Curriculum																				Vice Director IV	CP, Exp.		
	4.3. Develop and compile textbooks and subject contents.	Textbooks																				Vice Director IV	CP, Exp.		
	4.4. Install necessary equipment.																					Vice Director IV	Equipment		
	4.5. Develop teaching materials and handout for teachers.	Teaching materials																				Vice Director IV	CP, Exp.		
	4.6. Make course implementation plans.	Course plan																				Vice Director IV	CP, Exp.		
	4.7. Conduct courses.																					Vice Director IV	CP		
	4.8. Evaluate achievement and understanding of the participants.	Data achievement																				Head of Research & Comm. Service	CP, Exp.		
	4.9. Improve the implementation plans and content of the courses	Revises curriculum																				Vice Director IV	CP, Exp.		

ANNEX-III

Draft of Project Design Matrix (PDM)

Project title : The Project for Strengthening of Polytechnic Education in Electric- related Technology (SPEET)

Duration : 1999.10.1 ~2004.9.30 (5 years)

Implementing Agency : Electronic Engineering Polytechnic Institute in Surabaya (EEPIS)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>(Overall Goal) Well-trained electric-related polytechnic teachers are provided to polytechnics nationwide and they educate skilled technicians needed for industrial development.</p>	<ol style="list-style-type: none"> 1. The number of electric-related polytechnic teachers. 2. The ratio of qualified electric-related polytechnic teachers. 3. The number of electric-related technicians. 	<ol style="list-style-type: none"> 1. Publications and statistics of Department of Education and Culture 2. Same as above 3. Publications and statistics of Department of Manpower 	<p>The need for skilled related technicians change drastically.</p>
<p>(Project Purpose) To provide EEPIS with the ability to educate (1) for well qualified electric-related polytechnic teachers in the field of electronic, electrical and telecommunications engineering and (2) for skilled information technology technicians as well.</p>	<ol style="list-style-type: none"> 1-1. The number of graduates of Diploma 4 courses. 1-2. Satisfaction of other polytechnics which hire teachers trained in Diploma 4 and short-term courses. 2-1. The number of graduates of Information Technology Diploma 3 courses. 2-2. The ratio of graduates who successfully find jobs. 2-3. Satisfaction of graduates. 	<ol style="list-style-type: none"> 1-1. Records of EEPIS 1-2. Follow-up survey of participants 2-1. Records of EEPIS 2-2. Records of EEPIS 2-3. Survey of students or graduates and industries 	<p>Demand for polytechnic teacher according to 155 Polytechnic Development plan does not change drastically.</p>
<p>(Output) 1. In-service Diploma 4 courses (teachers' training courses/ 15 years) for electronic engineering, electrical engineering and telecommunications engineering are established and well-managed. 2. Pre-service Diploma 4 courses (teachers' training courses / 4 years) for electronic engineering, electrical engineering and telecommunications engineering are established and well-managed. 3. Diploma 3 course for Information Technology is established and well-managed. 4. In-service Teachers' short training courses for electronic engineering, electrical engineering and telecommunications engineering are established and well-managed. 5. The research and teaching capacity of EEPIS teaching staff members is strengthened. 6. Management system of EEPIS is strengthened.</p>	<ol style="list-style-type: none"> 1. 2. 3. 4. Curriculum, textbooks, teaching materials. Achievement of the participants. 1. 2. 3. The number of enrolled students and graduate. Dropout rate. 1. 2. 4. Evaluation of participants by the polytechnics which hire the participants. 3. The ratio of graduates who successfully find jobs. Evaluation of graduates by employers. 5. The number of master's degree holders. Presentation of research papers in academic meetings and/or journals. Academic achievement and understanding of the subjects of the participants. Evaluation of EEPIS teachers by the students and Graduates. 6. The number of users of the Job Arrangement system. The use of the maintenance and repair center. The number of meetings, conferences and seminars held for networking polytechnics 	<ol style="list-style-type: none"> 1. 2. 3. 4. Records of EEPIS 1. 2. 4. Questionnaires to participants 3. Questionnaires to employers 5. Follow-up survey of participants. Follow-up survey of graduates 6. Records of EEHS 	<p>Sufficient number of students apply for the courses.</p>
<p>(Activities) 1-1 Assign counterpart personnel for the courses. 1-2 Conduct surveys on the needs and situation of electric-related polytechnics. 1-3 Develop curriculum. 1-4 Develop and compile textbooks and subject contents. 1-5 Install necessary equipment. 1-6 Develop teaching materials and handbook for teachers. 1-7 Make course implementation plans. 1-8 Conduct courses. 1-9 Develop a method to evaluate achievement and understanding of the students. 1-10 Evaluate achievement and understanding of the students. 1-11 Review the implementation plans and contents of the courses. 1-12 Improve the implementation plans and content of the courses through feedback 1-13 Benchmarking and Quality Assurance set up. 2-1 Assign counterpart personnel for the courses. 2-2 Conduct surveys on the needs and situation of electric-related polytechnics. 2-3 Develop curriculum. 2-4 Develop and compile textbooks and subject contents. Install necessary equipment. 2-5 Develop teaching materials and handbook for teachers. 2-6 Make course implementation plans. 2-7 Conduct courses. 2-8 Develop a method to evaluate achievement and understanding of the students. 2-9 Evaluate achievement and understanding of the students. 2-10 Review the implementation plans and contents of the courses. 2-11 Improve the implementation plans and content of the courses through feedback 3-1 Assign counterpart personnel for the courses 3-2 Conduct surveys on the needs and requirement for Information Technology technicians. 3-3 Develop curriculum 3-4 Develop and compile textbooks and subject contents. 3-5 install necessary equipment 3-6 Develop teaching materials and handbook for teachers. 3-7 Make course implementation plans. 3-8 Conduct courses. 3-9 Develop a method to evaluate achievement and understanding of the students. 3-10 Evaluate achievement and understanding of the students. 3-11 Review the implementation plans and contents of the courses. 3-12 Improve the implementation plans and content of the courses through feedback 3-13 Develop the Job Arrangement system for Information Technology major students.</p>	<ol style="list-style-type: none"> 4.1 Conduct surveys on the needs and situation for In-service Teachers short training courses. 4.2 Develop curriculum. 4.3 Develop and compile textbooks and subject contents. 4.4 Install necessary equipment. 4.5 Develop teaching materials and handbook for teachers. 4.6 Make course implementation plans. 4.7 Conduct courses. 4.8 Evaluate achievement and understanding of the participants. 4.9 Improve the implementation plans and content of the courses through feedback. 5.1 Implement an in-country master's degree study program for EEPIS counterpart personnel. 5.2 Support research activities of EEPIS counterpart personnel. 5.3 Install necessary equipment. 6.1 Improve the existing Job Arrangement system. 6.2 Develop the network among electric-related polytechnics. 6-3 Improve revenue generating programs for strengthening financial sustainability. 6.4 Make a plan to improve equipment and facilities. 6.5 Procure and install necessary equipment. 6.6 Strengthen the procurement function of EEPIS. 6.7 Conduct training to operate and maintain equipment. 6.8 Improve maintenance, repair and calibration system for equipment. 6.9 Conduct survey of Engineering Competence Based Standard in Electric-related field Development. 	<p>(Input) [Indonesian side] Assignment of counterpart personnel Assignment of administrative personnel Buildings / Facilities Expenses necessary for the implementation of the Project [Japanese side] Long-term experts Short-term experts Training of Indonesian counterpart personnel in Japan Provision of equipment</p>	<p>Counterpart personnel are properly assigned. (Pre-conditions) Department of Education and Culture officially recognizes the Diploma 4 courses and Diploma 3 Information Technology course of EEPIS.</p>

ANNEX-IV

Draft of Project Design Matrix Evaluation (PDME)

Project title : The Project for Strengthening of Polytechnic Education in Electric-related Technology (SPEET)

Duration : 1999.10.1 ~ 2004.9.30 (5 years)

Implementing Agency : Electronic Engineering Polytechnic Institute in Surabaya (EEPIS)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>(Overall Goal) Well-trained electric-related polytechnic teachers are provided to polytechnics nationwide and they provide education needed for skilled technicians in industrial development.</p>	<p>1. The number of electric-related polytechnic teachers. 2. The ratio of qualified electric-related polytechnic teachers 3. The number of electric-related technicians.</p>	<p>1/2. Publications and statistics of Department of Education and Culture 3. Publications and statistics of Department of Manpower</p>	<p>The need for skilled related technicians does not change drastically.</p>
<p>(Project Purpose) To provide EEPIS with the ability to educate (1) for well qualified electric-related polytechnic teachers in the field of electronic, electrical and telecommunications engineering and (2) for skilled information technology technicians as well.</p>	<p>1-1. The number of graduates of Diploma 4 courses. 1-2. Level of satisfaction of other polytechnics which hire teachers trained in Diploma 4 and short-term courses. 2-1. The number of graduates of Information Technology Diploma 3 courses. 2-2. The ratio of graduates who successfully find jobs. 2-3. Evaluation of graduates by employers and level of satisfaction of graduates.</p>	<p>1-1. Records of EEPIS 1-2. Follow-up survey of participated schools 2-1. Records of EEPIS 2-2. Records of EEPIS 2-3. Follow-up survey of employers and graduates</p>	<p>Policy of Directorate of General of Higher Education and demand for polytechnic teacher according to 155 Polytechnic Development plan does not change drastically.</p>
<p>(Output) 1. In-service Diploma 4 courses (teachers' training courses/ 1.5 years) for electronic engineering, electrical engineering and telecommunications engineering are established and well-managed. 2. Pre-service Diploma 4 courses (teachers' training courses/ 4 years) for electronic engineering, electrical engineering and telecommunications engineering are established and well-managed. 3. Diploma 3 course for Information Technology is established and well-managed. 4. In-service Teachers' short training courses for electronic engineering, electrical engineering and telecommunications engineering are established and well-managed. 5. The research and teaching capacity of EEPIS teaching staff members is strengthened. 6. Management system of EEPIS is strengthened.</p>	<p>1.2.3.4. Curriculum, textbooks, teaching materials. Achievement of the participants 1.2.3. The number of applicants, enrolled students and graduates, drop out rate and repetition rate. 1.2.4. Evaluation of participants by the polytechnics which hire the participants 5. The number of master's degree holders. Presentation of research papers in academic meetings and/or journals. Academic achievement and understanding of the subjects of the participants. Evaluation of EEPIS teachers by the students and graduates 6. The number of users of the Job Arrangement System. The use of the maintenance and repair center. The number of meetings, conferences and seminars held for networking polytechnics Self-generated budget in EEPIS budget</p>	<p>1.2.3.4. Records of EEPIS 1.2.3. Records of EEPIS 1.2.4. Questionnaires to participants 5. Follow-up survey of participants Follow-up survey of graduates 6. Records of EEPIS</p>	<p>Sufficient number of students apply for the courses.</p>
<p>(Activities) 1-1 Assign counterpart personnel for the courses. 1-2 Conduct surveys on the needs and situation of electric-related polytechnics. 1-3 Develop curriculum. 1-4 Develop and compile textbooks and subject contents. 1-5 Install necessary equipment. 1-6 Develop teaching materials and handbook for teachers. 1-7 Make course implementation plans. 1-8 Conduct courses. 1-9 Develop a method to evaluate achievement and understanding of the students. 1-10 Evaluate achievement and understanding of the students 1-11 Review the implementation plans and contents of the courses. 1-12 Improve the implementation plans and content of the courses through feedback 1-13 Benchmarking and Quality Assurance set up. 1-14 Conduct follow-up survey of participated polytechnics. 2-1 Assign counterpart personnel for the courses. 2-2 Conduct surveys on the needs and situation of electric-related polytechnics. 2-3 Develop curriculum. 2-4 Develop and compile textbooks and subject contents. 2-5 Install necessary equipment 2-6 Develop teaching materials and handbook for teachers 2-7 Make course implementation plans. 2-8 Conduct courses. 2-9 Develop a method to evaluate achievement and understanding of the students. 2-10 Evaluate achievement and understanding of the students. 2-11 Review the implementation plans and contents of the courses. 2-12 Improve the implementation plans and content of the courses through feedback 2-13 Benchmarking and Quality Assurance set up. 3-1 Assign counterpart personnel for the courses 3-2 Conduct surveys on the needs and requirement for Information Technology technicians. 3-3 Develop curriculum 3-4 Develop and compile textbooks and subject contents. 3-5 Install necessary equipment 3-6 Develop teaching materials and handbook for teachers. 3-7 Make course implementation plans. 3-8 Conduct courses. 3-9 Develop a method to evaluate achievement and understanding of the students. 3-10 Evaluate achievement and understanding of the students. 3-11 Review the implementation plans and contents of the courses. 3-12 Improve the implementation plans and content of the courses through feedback 3-13 Set up benchmarking and quality assurance. 3-14 Develop the Job Arrangement system for Information Technology major students. 3-15 Conduct follow-up survey of employers and graduates.</p>	<p>4-1 Conduct surveys on the needs and situation for In-service Teachers short training courses. 4-2 Develop curriculum. 4-3 Develop and compile textbooks and subject contents. 4-4 Install necessary equipment. 4-5 Develop teaching materials and handbook for teachers. 4-6 Make course implementation plans. 4-7 Conduct courses. 4-8 Evaluate achievement and understanding of the participants. 4-9 Improve the implementation plans and content of the courses through feedback. 4-10 Conduct follow-up survey of participated polytechnics 5-1 Implement an in-country master's degree study program for EEPIS counterpart personnel. 5-2 Support research activities of EEPIS counterpart personnel. 5-3 Install necessary equipment 6-1 Improve the existing Job Arrangement system. 6-2 Develop the network among electric-related polytechnic. 6-3 Improve revenue generating programs for strengthening financial sustainability. 6-4 Make a plan to improve equipment and facilities. 6-5 Procure and install necessary equipment. 6-6 Strengthen the procurement function of EEPIS. 6-7 Conduct training to operate and maintain equipment. 6-8 Improve maintenance, repair and calibration system for equipment. 6-9 Conduct survey of Engineering Competence Based on Standard in Electric-related field Development.</p>	<p>(Input) (Indonesian side) Assignment of counterpart personnel Assignment of administrative personnel Buildings / Facilities Expenses necessary for the implementation of the Project (Japanese side) Long-term experts Short-term experts Training of Indonesian counterpart personnel in Japan Provision of equipment</p>	<p>Counterpart personnel are properly assigned. (Pre-conditions) Directorate General of Higher Education, Ministry of National Education, officially recognizes the Diploma 4 courses and Diploma 3 Information Technology course of EEPIS.</p>

PART 2 REVISION OF PDM

Both the Indonesian side and the Japanese side has agreed that Project Design Matrix of this Project should be revised as per Annex-V attached hereto.

This revision has been agreed mainly on the following aspects;

- (1) Establishment of D4 courses in Information Technology has been agreed to be included in the scope of the Project.
- (2) Modification of indicators considering availability of data.
- (3) Other correction of words to fit current situation surrounding the Project

ANNEX-V

Recommended Draft of Project Design Matrix Evaluation (Revised Version as of Nov., 15, 2001)

Project title : The Project for Strengthening of Polytechnic Education in Electric-related Technology (SPEET)

Duration : 1999.10.1 ~ 2004.9.30 (5 years)

Implementing Agency : Electronic Engineering Polytechnic Institute in Surabaya (EEPIS)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
(Overall Goal) Well-trained electric-related polytechnic teachers are provided to polytechnics nationwide and they provide education needed for skilled technicians in industrial development.	1. The number of electric-related polytechnic teachers. 2. The ratio of qualified electric-related polytechnic teachers 3. The number of electric-related technicians.	1/2. Publications and statistics of Department of Education and Culture 3. Publications and statistics of Department of Manpower	The need for skilled related technicians does not change drastically.
(Project Purpose) To provide EEPIS with the ability to educate (1) for well qualified electric-related polytechnics and (2) for skilled information technology technicians as well.	1-1. The number of graduates of Diploma 4 courses. 1-2. Level of satisfaction of other polytechnics which hire teachers trained in Diploma 4 and short-term courses. 2-1. The number of graduates of information Technology Diploma 3 courses. 2-2. The ratio of graduates who successfully find jobs. 2-3. Evaluation of graduates by employers and level of satisfaction of graduates.	1-1. Records of EEPIS 1-2 Follow-up survey of participated schools 2-1. Records of EEPIS 2-2. Records of EEPIS 2-3. Follow-up survey of employers and graduates	Policy of Directorate of General of Higher Education and demand for polytechnic teacher according to 155 Polytechnic Development plan does not change drastically.
(Output) 1. In-service Diploma 4 courses (teachers' training courses/ 1.5 years) for electronic engineering, electrical engineering, telecommunication engineering and information technology are established and well-managed. 2. Pre-service Diploma 4 courses (teachers' training courses/ 4 years) for electronic engineering, electrical engineering, telecommunication engineering and information technology are established and well-managed. 3. Diploma 3 course for information Technology is established and well-managed. 4. In-service Teachers' short training courses for electric-related field are established and well-managed. 5. The research and teaching capacity of EEPIS teaching staff members is strengthened. 6. Management system of EEPIS is strengthened	1.2.3.4. Curriculum, textbooks, teaching materials. A method to evaluate achievement and understanding Achievement of the participants developed. 1.2.3. The number of applicants, enrolled students and graduates, and drop out rate. Implementation plans and contents of the courses reviewed and improved. Benchmarking and level of quality assurance. 1.2.4. Evaluation of participants by teachers. 5. The number of master's degree holders. Acceptance research papers in domestic and international academic meetings and/or journals.. 6. The number of users of the Job Arrangement System. A plan to improve equipment and facilities. No. of staff, budget, equipment and training of staff in the maintenance and repair center. The number of meetings, conferences and seminars held for networking polytechnics. Self-generated budget in EEPIS budget. Engineering Competence Based on Standard in electric-related field Development.	1.2.3.4. Records of EEPIS 1.2.3. Records of EEPIS Review and improvement reports for the implementation plans and contents of the courses Benchmarking and quality assurance report 1.2.4. Questionnaires to participants 5. Records of EEPIS Follow-up survey of graduates 6. Records of EEPIS Engineering competence survey report	Sufficient number of students apply for the courses.
(Activities) 1-1 Assign counterpart personnel for the courses. 1-2 Conduct surveys on the needs and situation of electric-related polytechnics. 1-3 Develop curriculum. 1-4 Develop and compile textbooks and subject contents. 1-5 Install necessary equipment. 1-6 Develop teaching materials and handbook for teachers. 1-7 Make course implementation plans. 1-8 Conduct courses. 1-9 Develop a method to evaluate achievement and understanding of the students. 1-10 Evaluate achievement and understanding of the students 1-11 Review the implementation plans and contents of the courses. 1-12 Improve the implementation plans and content of the courses through feedback 1-13 Benchmarking and Quality Assurance set up. 1-14 Conduct follow-up survey of participated polytechnics. 2-1 Assign counterpart personnel for the courses. 2-2 Conduct surveys on the needs and situation of electric-related polytechnics. 2-3 Develop curriculum. 2-4 Develop and compile textbooks and subject contents. 2-5 Install necessary equipment 2-6 Develop teaching materials and handbook for teachers 2-7 Make course implementation plans. 2-8 Conduct courses. 2-9 Develop a method to evaluate achievement and understanding of the students. 2-10 Evaluate achievement and understanding of the students. 2-11 Review the implementation plans and contents of the courses 2-12 Improve the implementation plans and content of the courses through feedback 2-13 Benchmarking and Quality Assurance set up. 3-1 Assign counterpart personnel for the courses 3-2 Conduct surveys on the needs and requirement for Information Technology technicians. 3-3 Develop curriculum 3-4 Develop and compile textbooks and subject contents. 3-5 install necessary equipment 3-6 Develop teaching materials and handbook for teachers. 3-7 Make course implementation plans. 3-8 Conduct courses. 3-9 Develop a method to evaluate achievement and understanding of the students. 3-10 Evaluate achievement and understanding of the students. 3-11 Review the implementation plans and contents of the courses. 3-12 Improve the implementation plans and content of the courses through feedback 3-13 Set up benchmarking and quality assurance. 3-14 Develop the Job Arrangement system for information Technology major students. 3-15 Conduct follow-up survey of employers and graduates.	4-1 Conduct surveys on the needs and situation for In-service Teachers short training courses. 4-2 Develop curriculum. 4-3 Develop and compile textbooks and subject contents. 4-4 Install necessary equipment. 4-5 Develop teaching materials and handbook for teachers. 4-6 Make course implementation plans. 4-7 Conduct courses. 4-8 Evaluate achievement and understanding of the participants. 4-9 Improve the implementation plans and content of the courses through feedback. 5-1 Implement an in-country master's degree study program for EEPIS counterpart personnel. 5-2 Support research activities of EEPIS counterpart personnel. 5-3 Install necessary equipment 6-1 Improve the existing Job Arrangement system. 6-2 Develop the network among electric-related polytechnic. 6-3 Improve revenue generating programs for strengthening financial sustainability. 6-4 Make a plan to improve equipment and facilities. 6-5 Procure and install necessary equipment 6-6 Strengthen the procurement function of EEPIS. 6-7 Conduct training to operate and maintain equipment. 6-8 Improve maintenance, repair and calibration system for equipment 6-9 Conduct survey of Engineering Competence Based on Standard in Electric-related field Development.	(Input) (Indonesian side) Assignment of counterpart personnel Assignment of administrative personnel Buildings / Facilities Expenses necessary for the implementation of the Project (Japanese side) Long-term experts Short-term experts Training of Indonesian counterpart personnel in Japan Provision of equipment	Counterpart personnel are properly assigned. (Pre-conditions) Directorate General of Higher Education, Ministry of National Education, officially recognizes the Diploma 4 courses and Diploma 3 Information Technology course of EEPIS.

