

Malaysia

Ex-Post Evaluation of Japanese ODA Loan Project
“Universiti Malaysia Sarawak (UNIMAS) Development Project”

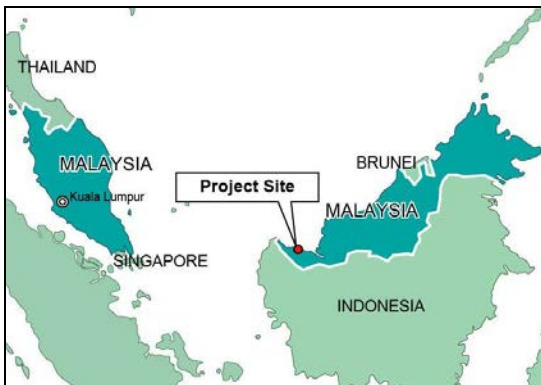
External Evaluator: Tanaka Erika, OPMAC Corporation

0. Summary

The objective of the project was to improve the quality and quantity of human resource development of UNIMAS by the construction of facilities for five faculties, the provision of educational equipment, and training and exchange programmes for university staff and students. Thus, the aim was to contribute to the development of human resources who can contribute to the development of Malaysia, thus in turn contributing to the improvement of the economic gap among regions. The objective is relevant with the development plan and development needs of Malaysia at the time of both the appraisal and the Ex-Post Evaluation, therefore its relevance is high. The facilities and equipment provided by the project are essential to education and research at UNIMAS and the number of students has been increasing. Academic staff dispatched to Japan on the Soft Development Programme have utilized the results of the programme and some of them participate in programmes implemented by industrial-academic-government consortia, thus contributing to local society. Therefore, the effectiveness of the project is high considering impact. The outputs of the project are generally relevant, in that the area of the faculty buildings was increased from the original plan but is sufficient to accommodate the increased number of students. However, the project cost was higher than planned and the project period was longer than planned. Therefore, efficiency is fair. The operation and management structure of UNIMAS is well established, without financial problems. Although some parts of the facilities have rainwater leakage, UNIMAS has already taken measures against the problem. Most of the academic and management staff dispatched to Japan on the Soft Development Programme still work at UNMAS. Thus, sustainability is high.

In light of the above, this project is evaluated to be highly satisfactory.

1. Project Description



Project Location



UNIMAS: Faculty of Applied & Creative Arts Building

1.1 Background

The Malaysian government has seen the education sector as one of the priorities of the Malaysia Plan (five-year development plan) since 1966 and has implemented various reforms.

However, the capacity and quality of domestic universities were insufficient and the Malaysian government depended on higher education institutes overseas. The government tried to improve domestic universities, reducing dependency on overseas universities. Six universities, including one private institution, were newly established in 1990, but the plan to enhance universities was delayed partly due to the economic crisis.

The project to support the Universiti Malaysia Sarawak (hereinafter called UNIMAS) through facility construction, equipment supply, and Soft Development Programmes (human resource development programmes) was implemented against the above background.

1.2 Project Outline

The objective of the project was to improve the quality and quantity of the human resource development of UNIMAS by the construction and improvement of five priority faculties, the provision of educational equipment, and through training and exchange programmes for university staff and students. Thus, the aim was to contribute to the development of human resources, which would contribute to the development of Malaysia, and improve the economic gaps among regions.

Loan Approved Amount / Disbursed Amount	18,549 million yen/ 18,403 million yen
Exchange of Notes Date / Loan Agreement Signing Date	March, 1999/ March, 1999
Terms and Conditions	Interest Rate: 0.75 % Repayment Period: 40 years (Grace Period: 10 years) Conditions for Procurement: General untied
Borrower / Executing Agency	Malaysia / UNIMAS
Final Disbursement Date	September, 2009
Main Contractor (Over 1 billion yen)	Taisei Corporation (Japan), Zecon Engineering Berhad (Malaysia)
Main Consultant (Over 100 million yen)	Project Management Service Consultant: Unico International Corporation (Japan)/ Hasmi (Malaysia) Engineering Service Consultant: Nihon Sekkei Inc. (Japan)/ ADC Akitek Sdn Bhd (Malaysia)/ Perunding, Hashim & NEH Sdn Bhd (Malaysia)
Feasibility Studies, etc.	None
Related Projects (if any)	Technical Cooperation Project: Multi-Media Network Education Project Grant Aid: Japanese language learning laboratory (Cultural Grant Aid)

2. Outline of the Evaluation Study

2.1 External Evaluator

Tanaka Erika, OPMAC Corporation¹

¹ Participated in the evaluation as a complementary member from Global Link Management, Inc..

2.2 Duration of Evaluation Study

Duration of the Study: August, 2011 – August, 2012

Duration of the Field Study: October 23, 2011 – November 5, 2011,
February 26, 2012 – March 3, 2012

2.3 Constraints during the Evaluation Study

None in particular.

3. Results of the Evaluation (Overall Rating: A²)

3.1 Relevance (Rating: ③³)

3.1.1 Relevance with the Development Plan of Malaysia

The Malaysian government prioritizes human resources development in order to contribute to economic development in its development plans at the time of both the appraisal and the Ex-Post Evaluations. The project is relevant to Malaysian policy.

The Malaysian government has prioritized the education sector in the Malaysia Plans (five-year development plan) since 1966 and listed human resources development as key to making the country a developed nation by 2020. The Malaysian government, however, did not positively enhance domestic universities. It did not grant the establishment of private universities, and complemented higher education by sending students overseas. Thus, the enrolment rate at domestic universities was limited to approximately 3.7% (1995). In the Seventh Malaysia Plan (1996-2000) at the time of appraisal, the objective of education was defined as the development of a quality work force and human resources with high moral and favourable labour ethics. Priorities were a quantitative improvement of the educational environment, improvement of the quality of education, the correction of regional disparities, and the enhancement of higher education institutes, especially in terms of human resources development for science research. Therefore, the project, which improved the physical environment, the quality of education and university management, all with a focus on science and technology faculties, was consistent with the Malaysian development plan.

At the time of the Ex-Post Evaluation, the Tenth Malaysia Plan (2011-2015) states that nurturing globally competitive, creative and innovative human resources is the foundation for Malaysia needed to become a high-income nation.

Seven strategic thrusts were listed in the National Higher Education Strategic Plan beyond 2010 (published in 2004). These were widening access and increasing equity, improving the quality of teaching and learning, enhancing research and innovation, strengthening higher education institutions, intensifying internationalisation, enculturation of lifelong learning and reinforcing the delivery systems of the Ministry of Higher Education (MoHE). As the project includes facility construction and human resource development, it is consistent with the strategies. There was also a list of four critical factors for the success of higher education, namely, governance, culture, infrastructure, and resources. Infrastructure includes facilities as one of its physical aspect and training as a non-physical aspect, and these are also relevant to the project.

3.1.2 Relevance with the Development Needs of Malaysia

Relevance with development needs is high, at both the time of the appraisal and the Ex-Post Evaluations. Enrolment at public universities is expected to increase according to estimates by MoHE.

At appraisal, there were only a limited number of higher education institutes in Malaysia, as stated in 3.1.1. Based on the policy to enhance domestic universities, six new universities

² A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

³ ③: High, ②: Fair, ①: Low

(one of these is private) were established in the 1990s but this whole plan was delayed after the economic crisis.

UNIMAS was established in 1992 as the eighth national comprehensive university and the only university in Sarawak State. However, UNIMAS had only temporary buildings and student enrolment was limited to about 2000, only one-third of applicants. The Malaysian government had formulated a plan to enhance the capacity of UNIMAS but implementation was impeded due to financial difficulties.

UNIMAS has the following kinds of faculties: those with high economic and social needs (Faculty of Medicine & Health Sciences, Faculty of Engineering, Faculty of Information Technology), faculties with a comparative advantage based on the natural resources of Sarawak (Faculty of Resource Science & Technology, Faculty of Applied & Creative Arts), and a faculty with interdisciplinary characteristics (Faculty of Cognitive Sciences & Human Development). The project targeted five faculties, namely, the Faculty of Resource Science & Technology (FRST), the Faculty of Information Technology (FIT), the Faculty of Applied & Creative Arts (FACA), the Faculty of Engineering (FE), and the Faculty of Cognitive Sciences & Human Development (FCSHD). The Faculty of Medicine & Health Sciences was not included in the scope of the project as it had already sufficient facilities. The Faculty of Social Sciences and the Faculty of Economics & Business were also excluded from the project as they did not need much equipment and could use the facilities of other faculties when necessary. The selection of five faculties is adequate.

At the time of the Ex-Post Evaluation, both the population of higher education age (17 to 23) and university enrolment were expected to increase, according to the estimates of MoHE (Table 1).

Table 1: Enrolment in higher education

Unit: Year/%

	2003	2005	2010	2015
Population of 17-23 year olds	3,277,338	3,399,200	3,628,300	3,840,900
Total enrolment in higher education*	979,745	1,140,040	1,485,600	1,759,200
Enrolment rate in higher education, population of 17-23 year olds	29.9	33.5	40.9	45.8
Enrolment in post-secondary education**	158,459	235,740	351,700	388,300
Enrollment rate in post-secondary education, population of 17-23 year olds	4.8	6.9	9.7	10.1
Enrolment in public colleges***	140,999	200,100	250,500	304,800
Enrolment rate in public colleges, population of 17-23 year olds	4.3	5.9	6.9	7.9
Enrolment in private education institutions	337,949	336,900	465,700	567,800
Enrolment rate in private education institutions, population of 17-23 year olds	10.3	9.9	12.8	14.8
Number of students overseas	62,301	56,800	50,000	50,000
Rate of students overseas, population of 17-23 year olds	1.9	1.7	1.4	1.3
Enrolment in public universities	280,037	310,500	371,700	458,300
Enrolment rate in public universities, population of 17-23 year olds	8.5	9.1	10.2	11.9

Source: National Higher Education Strategic Plan beyond 2020

Notes: Date for 2003 is actual.

* Total of post-secondary education, public colleges, private education institutions, public universities and students overseas.

** Post-secondary education includes institutions for students with secondary education completion certificate (A-level or equivalent)

***Public colleges include polytechnics and community colleges under MoHE, training institutes under Ministry/Department/Agency and others.

In East Malaysia (Sarawak and Sabah), there were only two public universities at the time of the Ex-Post Evaluation, and the need to improve UNIMAS was still high. According to an interview with MoHE, UNIMAS is considered to be one of the best comprehensive universities in Malaysia. At a comprehensive university, emphasis is placed not only on academic research but on education for students at undergraduate level as well. Thus it was appropriate to construct faculty buildings to accommodate the expected increase in students. It was noted that there were quite a number of students and academic staff going abroad to study or research in spite of the government policy to improve domestic universities. Against this background, UNIMAS has been trying to achieve a synergy effect produced by improved education inside UNIMAS and by study/research overseas. The project, which included construction as well as the soft component in Japan, was in line with the policy of UNIMAS

3.1.3 Relevance with Japan's ODA Policy

The project is consistent with one of the four priority areas of the policy of Medium-Term Strategy for Overseas Economic Cooperation Operations toward Malaysia, i.e. human resource development – human resources with a high level of knowledge and skills..

This project has been highly relevant with the country's development plan and development needs, as well as Japan's ODA Policy, therefore its relevance is high.

3.2 Effectiveness⁴ (Rating:③)

3.2.1 Quantitative Effects (Operation and Effect Indicators)

In the plan at appraisal, it was expected that the number of students (operation and effect indicator) would increase from 2000 in 1998 to 5300 in 2004.

The number of enrolled students and graduates has been increasing since the appraisal (1999) as shown in Table 2 and Table 3. It is expected that the number of students enrolled will be 15000 in 2015, as planned, which means that the expected effects are produced, through building construction. UNIMAS estimates that the faculty buildings constructed have sufficient capacity to accommodate students until 2015 and there are plans to expand facilities after that. It is pointed out, however, that the building is already short of space at FACA, where the number of students has been sharply increasing since 2008.

Table 2: Transition of number of students enrolled at UNIMAS

(Faculty/year)	1999	2005	2008	2011
FACA	256	608	915	1,768
FCSHD	363	1,221	1,043	1,338
FE	405	610	968	1,225
FIT	398	355	402	594
FRSD	385	745	933	1,336
Total (all faculties)	2,835	5,504	6,429	9,611

Source: Documents submitted by UNIMAS

⁴ Sub-rating for Effectiveness is to be put with consideration of Impact

Table 3: Transition of number of graduates at UNIMAS

(Faculty/year)	1999	2005	2008	2011
FACA	62	124	198	212
FCSHD	82	301	351	217
FE	74	155	99	266
FIT	91	69	75	39
FRSD	40	177	266	287
Total (all faculties)	490	1,251	1,470	1,517

Source: Documents submitted by UNIMAS

The ratio of students from areas other than Sarawak increased from about 30% at appraisal to 65% at the Ex-Post Evaluation. (Table 4).

Table 4: Number of students classified by place of residence at UNIMAS

(Area/Year)	1999	2005	2008	2011
Peninsular Malaysia	275	875	828	2,262
Sarawak	778	862	844	1,396
Sabah	71	130	121	279
Others	3	17	19	45
Total	1,127	1,884	1,812	3,982
Rate of students from Sarawak	69.0	45.7	46.6	35.0

Source: Documents submitted by UNIMAS

3.2.2 Qualitative Effects

Qualitative effects of the building and equipment supplied through the project are recognized in terms of education for students and research by academic staff. All the faculty buildings are used for classes. Specifications are appropriate to accommodate an increased number of students, to place laboratories, and to provide education effectively.

Questionnaires taken during the Ex-Post Evaluation show that both academic staff and students are satisfied with the specifications of faculty buildings (Table 5). According to interviews, administrative staff are also satisfied with the buildings. The reason why some academic staff are not satisfied with the building may be that the buildings have rainwater leakage (for details, see 3.5 Sustainability).

Table 5: Opinions about the buildings of academic staff and students

	Totally satisfied	Satisfied	More or less satisfied	Not satisfied	Total (5 faculties)
Academic staff	1	9	11	3	24
Students	6	31	6	0	43

Source: Questionnaire during the Ex-Post Evaluation

Equipment supplied through this project is utilized during classes. Academic staff and students consider the equipment to be useful, according to the questionnaire (Table 6). Equipment is essential especially at FRST, FIT, FE, and FACA⁵. Although there was not much

⁵ Some students did not clearly recognize which equipment had been supplied through the project. However, all the faculties frequently utilize equipment supplied through the project, therefore it can be assumed that students realize that they use project equipment quite often.

difference between the faculties in the questionnaire, the interviews at FCSHD reveal that the evaluation of equipment was not very high. This is partly because FCSHD is specializes in humanities, where the need for equipment is not as high as at the other four faculties of science and technology, and partly because the bulk of equipment supplied to FCSHD was computers whose specifications are already becoming outdated. Nonetheless, computers are important at FASHD in analyzing data and compiling, and therefore it is considered adequate to supply the faculty with computer. According to data compiled by UNIMAS, there was a remarkable increase in the number of research projects at the five faculties in 2010. As subsidies for research also increased in the same year, it is difficult to discern a clear connection with this project. However, it was confirmed through interviews that the equipment is essential for a majority of classes and research since some of the equipment is basic and utilized broadly for various types of experiments.

Table 6: Opinions about equipment of academic staff and students

	Totally satisfied	Satisfied	More or less satisfied	Not satisfied	Total (5 faculties)
Academic staff	1	18	4	1	24
Students	10	29	4	0	43

Source: Questionnaire during the Ex-Post Evaluation



Computer laboratory at FCSHD



Auditorium in Central Teaching Facilities

Academic staff who participated in the Soft Development Programme are satisfied with the programme (Table 7), mentioning that the programme was useful in acquiring knowledge necessary for research as well as knowledge of Japanese culture and ways of thinking. Administrative staff who participated in the technical and management programme had observation tours on the management of Japanese universities and the operation and maintenance of facilities. They were satisfied with their visit (Table 7), commenting that they had learned about university management and labour ethics, which are useful when implementing their duties at UNIMAS. One notable course in the Soft Development Programme is “internship”, where participants visited one university during their stay in Japan. The participants were highly satisfied with this course as they had the opportunity to visit several departments of the university and to experience actual management work. The participants have already incorporated their experiences into their work, for example, student event management and activities to support dormitory student committees. Other management courses included visits to several universities during a stay. Although these were useful in grasping an overview of Japanese university management, they were not sufficient to learn specific management and technical skills.

Table 7: Opinions about the Soft Development Programme
(Academic and administrative staff)

	Totally satisfied	Satisfied	More or less satisfied	Not satisfied	Total
Academic staff	3	7	0	0	10
Administrative staff	1	1	0	0	2

Source: Questionnaire during the Ex-Post Evaluation

3.3 Impact

3.3.1 Intended Impacts

At appraisal, it was expected that the project would contribute to the nurturing of human resources, contributing to the development of Malaysia, and also to the correction of regional disparities. The Ex-Post Evaluation evaluated that the capacity for human resource development at UNIMAS had been enhanced, and that human resources contributing to local society were being developed.

(1) Development of human resources contributing to Malaysia

① Improvement of education and research

The quality of education at UNIMAS is considered to have been improved by the fact that the educational facilities and equipment are well utilized and that academic staff who have acquired degrees through the project are now engaged in education at UNIMAS. Therefore it can be expected that UNIMAS will produce human resources with high quality education. In addition, it is pointed out that research activities have been enhanced. Research exchanges with Japanese universities are especially active through the Soft Development Programme. Currently UNIMAS has Memoranda of Understanding (MOU) for academic collaboration with 59 universities worldwide (as of the end of December 2011), out of which nine have been signed with Japanese universities. The majority of MOU with Japanese universities were concluded, having been triggered by the soft component program of this project. This can be seen as an indirect impact of the Project. If more research is conducted based on MOU, this will lead to further improved education at UNIMAS, contributing further to the production of quality human resources.

UNIMAS promotes interdisciplinary research. Equipment supplied through the project is used in research in collaboration with other faculties, and academic staff who have participated in human resource development conduct research with other faculties. Thus the benefits of the project trickle down to other faculties, leading to an improvement in education and research at the university as a whole and thus contributing to the production of human resources which will contribute to Malaysian development in the future.

After the completion of the project UNIMAS was awarded a prize by the Malaysian government for its excellent facilities. In 2011, UNIMAS was ranked among the “Asian top 200 universities” evaluated by Quacquarelli Symonds, a Hong Kong research body. These facts show that external evaluation of UNIMAS has improved and that the project has contributed to this.

② Contribution to local society

The Sarawak State government is implementing the Sarawak Corridor of Renewable Energy (SCORE), a large scale project by a government-academic-industry consortium. At UNIMAS, quite number of academic staff, including the participants of the Soft Development Programme of the project, are participating in SCORE.

In regard to the employment of graduates, which is one of indicators showing the contribution made by the project to local society, no clear relation with the project has been found. In a tracer study conducted by UNIMAS, only “employed” or “unemployed” were

indicated, without descriptions of the field of employment. In addition, many students had not secured employment at the time of the tracer study taken place at convocation.

(2) Correction of regional disparities

No clear impact on the correction of regional disparities was found at the Ex-Post Evaluation. However, if local projects like SCORE bring about benefits to local society through the participation of UNIMAS staff, this will contribute to the correction of regional disparities in the future.

3.3.2 Other Impacts

Some positive impacts produced by the project can be pointed out, for example, the utilization of facilities open to local people and the economic benefits to local communities. No negative impacts have been reported.

(1) Impacts on the Natural Environment

The Environmental Impact Assessment at appraisal did not find any major negative impact on the natural environment. Nor was any negative impact on the natural environment found in the Ex-Post Evaluation. The majority of the construction site was not in primary forest (natural virgin forest) but in secondary jungle cleared by burning, and a serious impact on the natural environment was not expected. According to an interview during the Ex-Post Evaluation, chemical substance and waste water were being properly treated in accordance with government regulations. Appropriate consideration was given to the natural environment during and after construction.

(2) Land Acquisition and Resettlement

No problems were found in land acquisition and resettlement. Land acquisition had been almost completed in accordance with Malaysian regulations at the time of appraisal. According to an interview with the person in charge of environment at UNIMAS, some families continued to live on the construction site because they did not need to move immediately. They left soon after compensation was paid and resettlement was completed without a major problem.

(3) Unintended Positive/Negative Impact

UNIMAS leaves some facilities open to communities, for example, the Center for Academic Information Services (library) and sports centers, which means that some of the project benefits are shared with local communities. In addition, commercial complexes have been constructed around UNIMAS since 2005, when the construction works were under progress, giving stimulus to the local economy.

This project has largely achieved its objectives, therefore its effectiveness is high.

3.4 Efficiency (Rating: ②)

3.4.1 Project Outputs

This project consisted of 1) building construction, 2) infrastructure, 3) equipment, 4) the Soft Development Programme, and 5) consulting services. The total space of faculty buildings was larger than the original plan, while the provision of infrastructure and equipment was implemented as planned. Parts of the Soft Development Programme, such as the Japanese Language Training Programme and the Short-term Student Exchange Programme, were not conducted as planned because there was not much need for them.

1) Building Construction

The specifications of buildings are as follows.

Table 8: Specifications of building construction

Facility/building	Plan		Actual	
	Floor area (m ²)	Accommodation capacity (persons)	Floor area (m ²)	Accommodation capacity (persons)
Academic & research facilities				
FRST	14,200.00	710	62,500.00	3,125
FIT	10,500.00	1,167	17,000.00	1,875
FACA	5,700.00	285	20,000.00	1,000
FE	11,600.00	430	33,800.00	1,250
FCSHD	(Shared with FIT)		6,939.00	771
(Sub-total)	(42,000.00)	(2,592)	(140,239.00)	(8,021)
Academic support & administration facilities				
Center for Language & Communication Studies	3,560.00		3,600.00	400
Center for Academic & Information Services	15,800.00		21,351.50	
Chancellery & Administration	8,500.00		17,590.00	
University House	4,065.00		Included in Chancellery & Administration	
Center for Student Development	8,242.00		11,196.00	
Central Teaching Facilities	2,800.00	1,191	6,580.00	2,800
(Sub-total)	(42,967.00)		(60,318.00)	
Student Hostel & Staff Quarter				
Student College	10,800.00	600	11,000.00	611
Staff Quarter G	3,600.00	36 units	2,100.00	20 units
Staff Quarter H	Included in Staff Quarter G		1,700.00	20 units
(Sub-total)	(14,400.00)		(14,800.00)	
Others				
Energy Supply Facilities	6,000.00		2,700.00	2,700.00
Grand total	105,367.00		218,057.00	

Source: Documents of appraisal, Documents submitted by UNIMAS

In the plan at appraisal, the construction of faculty buildings (FRST, FIT/FCSHD <to be shared>, FACA, FE), academic support & administration facilities, student hostels, staff quarters, and energy supply facilities was planned with a total floor area of 105,367m². At appraisal one building was planned for FIT and FCSHD. In 2000, a proposal for scope change was issued, requesting the construction of two individual buildings for FIT and FCSHD instead of one shared building, as the number of students was expected to increase more sharply than had been estimated in the Ex-Ante Evaluation. The proposal was in line with the original request for five individual buildings before appraisal and the estimated construction costs did not exceed the plan. Therefore, the proposal was approved.



FIT building



Centre for Academic Information Services, inside

The total floor area of faculty buildings was expanded, compared to the original plan. This was because individual buildings were constructed for FIT and FCSHD, as mentioned above, and the floor area of each faculty building was enlarged based on the estimates of the number of students. Construction costs were estimated based on international standards at appraisal. When the actual cost was calculated based on estimates from local suppliers at the time of bidding, it proved possible to construct buildings to accommodate the student numbers which were increasing more sharply than was originally expected. The increase in construction costs that resulted from the enlarged floor area was covered by UNIMAS's own financial source. The floor area of other buildings such as the academic support & administration facilities and the student hostels was also larger than the original plan, but not by much.

As to the actual number of students in comparison with the accommodation capacity of the faculty buildings, there is difference among the faculties. Some faculties have more students than the planned capacity, while others have less. However, the number of students for the five faculties in total is not very much different from the total accommodation capacity of the buildings. Therefore, it is concluded that there is not a major problem in the expansion of the floor area of faculty buildings.

2) Infrastructure

At appraisal, building platforms preparation work and basic infrastructure works (road, water supply, drainage, power supply, sports facilities, etc.) were planned as an infrastructure component. The infrastructure works were completed almost as planned.

3) Equipment

Documents from appraisal state that the types of equipment would be specified for each faculty after the commencement of the project. Equipment was supplied to each of the five faculties and in 10 packages due to the bidding procedures. The details are as follows.

Table 9: Equipment supplied

Package	Type of equipment
Package 1	Computers (FIT/FCSHD)
Package 2	IT software & Hardware (FIT)
Package 3	Civil Engineering Research Equipment (FE)
Package 4	Mechanical Engineering Research Equipment (FE)
Package 5	Electronics & Telecommunication Engineering Research Equipment (FE)
Package 6	AV systems & Stage Lighting/Flying Systems (FACA)
Package 7	Scientific Analytical Equipment (FRST)

Package	Type of equipment
Package 8	TV/Photo Equipment (FACA)
Package 9	Special-use computers and software (FACA)
Package 10	Industrial Research Equipment (FACA)

Source: Documents submitted by UNIMAS

To select equipment, UNIMAS organized selection committees for each faculty comprised of academic staff in accordance with intra-university regulations. Each committee compiled a list of equipment to be supplied based on an education plan for the coming three to five years. After compiling the list, equipment was supplied through the bidding procedure stipulated by UNIMAS. Although a number of academic staff who did not work at UNIMAS at the time of equipment selection commented that, for them, the reason for the selection of some equipment was not clear, the majority of academic staff consider that the selected equipment is appropriate for education and research. It can be said that the procedure for equipment supply was appropriate.

4) Soft Development Programme

The details of Soft Development Programme are as follows.

Table 10: Soft Development Programme

Plan		Actual	
Programme	Description	Programme	Participants (person)
1. Academic Staff Training (Master, Ph.D)	4 batches Total 24 persons	1. Academic staff (Master)*	15
		Academic Staff (PhD) *	12
2. Academic Staff Exchange	4 months, 6 batches Total 7 persons	2. Academic Staff Exchange (short-term)	3
3. Short-term Student Exchange	1 year, 7 batches Total 11 persons	3. Short-term Student Exchange	Student: 11 Staff: 3 **
4. Japanese Language Training Programme	1 year, 3 batches Total 3 persons	4. Japanese Language training Programme	None
5. Academic & management staff programme	1 month, 7 batches Total 12 persons	5. Academic & management staff programme	71 (4 days to 1 month)
6. Supporting & technical staff programme	3 months, 6 batches Total 12 persons	6. Supporting & technical staff programme	
7. Japanese professors/lecturers visiting at UNIMAS	6 months, 6 batches Total: 6 persons	7. Japanese professors/lecturers visiting at UNIMAS	None
		8. Internship	5

Source: Documents submitted by UNIMAS

Notes: * Academic staff dispatched to the Master/PhD programmes obtained their expected degrees except for two, who were waiting for the results of their thesis at the time of the Ex-Post Evaluation.

** Students were guided by staff at the Student Affairs Section.

As for Academic Staff Training (Master/PhD) Programmes, where 24 were planned to be dispatched, 27 persons were in fact dispatched, all of whom obtained a degree (including those who were waiting for results at the time of the Ex-Post Evaluation). In order to select participants for academic staff training, UNIMAS defined the criteria and procedures and presented them to JICA for approval. In fact, all those who wanted to participate in the programme were accepted by UNIMAS upon application, as there were not so many applicants. However, the setting up of clear selection criteria was considered an appropriate procedure.

In the Short-term Student Exchanges, students visited the universities where academic staff

were dispatched through the project programmes, and enjoyed exchange events with students in Japan. At first, UNIMAS had planned to have student exchange visits to Indonesia as a student council programme, apart from this project. Later, however, the visits were made a part of the programmes of this project and students were sent to Japan instead. This is the only programme under the Short-term Student Exchange, and one-year study programme that was originally planned was not conducted.

Japanese Language Training Programmes and Japanese professors/lecturers visits were not conducted at all. Had these programmes been implemented, UNIMAS would have had more academic staff familiar with Japan and the Japanese language, which would have provided a positive impact on other staff at UNIMAS, and thus would also have promoted other Soft Development Programmes as a result.

The following is the reasons why the Soft Development Programme was not implemented as planned or why there was not much need for the Programme.

Table 11: Issues regarding the Soft Development Programme

Programme	Reason (Programmes not implemented as planned / Needs for the Programme not high)
Academic Staff Training (Master, PhD)	<ul style="list-style-type: none"> - A sufficient needs survey was not conducted at planning. - Information was not sufficient or not appropriately presented to candidates for smooth recruitment. - Insufficient support for research through Japanese and English by academic staff at Japanese universities. Japanese classes were not sufficiently provided. - Insufficient support for families of dispatched academic staff.
Short-term Student Exchanges	<ul style="list-style-type: none"> - System to transfer academic units for exchange students was not well established. - A majority of students wanted to have an exchange programme in a country where classes are given in English (Australia, the United Kingdom, etc.)
Japanese professors/lecturers visiting UNIMAS	<ul style="list-style-type: none"> - The need for Japanese study was low. - There was a concern about studying Japanese. - Information about research and research exchange for Japanese professors/lecturers was not sufficient.

Source: Interview at UNIMAS

5) Consulting Services

Based on the plans, Project Management Services Consultants were designated to support UNIMAS in project management, coordination with related organizations, equipment selection, and Soft Development Component implementation. Also, Engineering Service Consultants were assigned to support UNIMAS in the development of basic and detailed design, the elaboration of tender documents, and the management of construction works. According to interviews at the Ex-Post Evaluation, these consultants provided essential support for smooth project implementation.

3.4.2 Project Inputs

3.4.2.1 Project Cost

The total project cost was mostly as planned considering the increase in the output.

The total project cost, which was estimated as 24,732 million yen at planning, turned out to be 31,103 million yen due to the increased outputs.

The project cost at planning and at the Ex-Post Evaluation is as shown in Tables 12 and 13. The cost for building construction and infrastructure increased to 161% of the original plan. This is because the total floor plan of buildings was expanded to almost twice of the original plan, in accordance with the estimate of the number of students.

The cost for buildings was originally calculated using international standard prices, but when the cost estimation was made based on the prices of local suppliers, the estimation turned out to be lower than the original, which made it possible to construct buildings with an

expanded floor area. The increased portion of the cost was covered by contingency and the cost for other components by loans and by Malaysian funds. The Malaysian portion of the buildings and infrastructure increased from 4,371 million yen to 11,193 million yen, which was 2.6 times of the original. Thus, the rate of the Malaysian portion of the buildings and infrastructure increased from 29% in the original plan to 46% actual.

Table 12: Project cost breakdown (Original plan)

Unit: Million yen

Component	Foreign Currency		Local Currency			Total	
	Total	Japanese ODA Loan portion	Total	Japanese ODA Loan portion	Total	Japanese ODA Loan portion	Malaysian portion
Building construction & Infrastructure	5,185	5,185	9,890	5,519	15,075	10,704	4,371
Equipment	3,280	3,280	162	162	3,442	3,442	0
Soft Development Programme	523	523	0	0	523	523	0
Electric works and other facilities	0	0	162	0	162	0	162
Contingency	899	899	1,020	505	1,920	1,404	516
Consulting Services	1,463	1,463	1,013	1,013	2,476	2,476	0
Tax	0	0	1,135	0	1,135	0	1,135
Grand total	11,349	11,349	13,382	7,200	24,732	18,549	6,183

Source: Documents submitted by UNIMAS

Note: The exchange rate applied to calculation of the Malaysian portion is: 1RM=31.9 yen. (As of December 1998)

Table 13: Project cost breakdown (Actual)

Unit: Million yen

Component	Foreign Currency		Local Currency		Total		
	Total	Japanese ODA Loan portion	Total	Japanese ODA Loan portion	Total	Japanese ODA Loan portion	Malaysian portion
Building construction & Infrastructure	2,042	2,042	22,174	10,980	24,216	13,023	11,193
Equipment	998	998	3,166	1,641	4,164	2,639	1,525
Soft Development Programme	443	443	0	0	443	443	0
Consulting Services	2,266	2,266	13	13	2,279	2,279	0
Grand total	5,750	5,750	25,353	12,634	31,103	18,384*	12,719

Source: Documents submitted by UNIMAS and documents of JICA

Note: * 18,403 million yen with 0.1% commission for disbursement. Contingency and taxes indicated in the original plan were not described as independent components in the final report. The exchange rate is: 1RM=30.5 yen (average from the IMF "International Financial Statistics" 1999-2009)

3.4.2.2 Project Period

The project period was longer than planned. The original project period was from March 1999 to March 2007, a total of 97 months. The actual project period was March 1999 to April 2009, a total of 122 months, which was 126% of the original plan. Details of the planned and actual project period are shown in Table 14. The period necessary for building construction & equipment and for the Soft Development Programme was considerably prolonged.

Table 14: Project period (Original & Actual)

Original		Actual	
Consulting Services	January 2000 to October 2005	Consulting Services	January 2000 to September 2006
Construction & Equipment	January 2000 to October 2005	Construction & Equipment	January 2000 to March 2008 (including the period for test operation and training)
Soft Development Programme	April 1999 to March 2007	Soft Development Programme	June 1999 to April 2009
Completion*	March 2007	Completion*	April 2009
Project period	97 months	Project period	122 months

Source: Documents of JICA in planning, Documents submitted by UNMAS

Note: * Definition of completion: at the time of completion of the programme for the last person to be dispatched in the Soft Development Programme

During project implementation, UNIMAS organized a committee comprising of responsible persons and held regular meetings to monitor progress. Information was shared with the Ministry of Education. The project implementation system is considered to have been appropriate. The extended project period can be partly attributed to the floor area of faculty buildings being larger than the original plan. However, a more significant factor in the extended project period was that UNIMAS personnel were not familiar with the procedures for and operation of Japanese ODA loans and thus they needed longer than expected. The project was the first ODA loan project for UNIMAS. Procedures for the tenders for equipment supply took an especially long time. In the tender for equipment supply based on the original plan, there was only a limited number of suppliers. Therefore, UNIMAS decided to convene tender for equipment in 10 packages. However, it took a long time to implement the tender process again. In these circumstances, according to an interview, the support for project implementation from the PMS consultant was useful. In addition, to facilitate project implementation and to improve ODA loan procedures, Special Assistance for Project Implementation (SAPI) was implemented in March 2003.

3.4.3 Results of Calculations of Internal Rates of Return (IRR)

Due to the nature of the project, a quantitative analysis of the internal rate of return was not possible

Although the project cost exceeded the plan, it is regarded as reasonable considering the increase in the output. On the other hand, project period also exceeded the plan, therefore, efficiency of the project is fair.

3.5 Sustainability (Rating: ③)

3.5.1 Structural Aspects of Operation and Maintenance

UNIMAS is considered to have an adequate management system for the university and the maintenance of its physical facilities.

UNIMAS has an academic unit (eight faculties and four centres), a research unit (seven institutes) and an administration unit, under the Vice-Chancellor. Matters of the management of UNIMAS are discussed and decided by a steering committee comprising of representatives of UNIMAS (Vice-Chancellor and the directors of faculties and institutes) and of related agencies (Economic Planning Unit, Ministry of Finance, Ministry of Education, State government of Sarawak, etc.). Planning for the maintenance of the facilities of the whole university as well as the maintenance of the facilities for common use is managed by the Development and Asset

Management Division. The maintenance of facilities and equipment at faculties, including the budget, is managed by the maintenance section of each faculty. A large part of equipment is maintained by external agencies, with a maintenance record administered by the Development and Asset Management Division.

3.5.2 Technical Aspects of Operation and Maintenance

Sustainability in the technical aspect is high. A sufficient number of personnel is allocated to the Development and Asset Management Division and the maintenance sections of the five faculties. A total of 193 persons are allocated to the Development and Asset Management Division, including workers and drivers. Four of the 193 are engineers and 16 are assistant engineers (As of February 2012, source: documents of UNIMAS). Operation and maintenance are conducted properly. At the time of the handover of facilities and equipment, training was provided only for operation, and there was no training for maintenance, only the provision of manuals. Therefore, some members of staff felt that they did not have the sufficient knowledge and skills for maintenance, according to interviews.

Participants in the Soft Development Programme still remain at UNIMAS, except for one, who has retired. Participants, both academic and management staff, are still exchanging information in order to continuously improve their knowledge and skills, although there is no official alumni organization.

3.5.3 Financial Aspects of Operation and Maintenance

The financial sources for the operation and maintenance of facilities is stably secured at UNIMAS. UNIMAS is planning to expand profitable research and projects in addition to receiving regular revenue allocated by the government.

The budget of UNIMAS is classified into two categories: an operating budget and a development budget. Expenditure for the operation and maintenance of facilities and equipment is disbursed from the operating budget. The budget and the actual expenditure for the operation and maintenance of facilities and equipment are as follows. Every year the total expenditure actually spent on operation and maintenance is within the allocated budget. According to interviews, operation and maintenance expenditure at faculty level sometimes exceeds the annual budget allocated for each faculty. However, the budget can be spent in a flexible way with transfer among faculties. Therefore, UNIMAS has so far not seen a huge deficit in its total operation and management expenditure for the whole university. In addition, UNIMAS has been making efforts to secure its own financial foundation and has sufficient financial capacity as seen in the fact that UNIMAS allocated its own budget for expanded facility construction as described in “3.4. Efficiency”.

Table 15: Budget and expenditure for operation and maintenance at UNIMAS

Unit: RM				
Year	1999	2005	2008	2011
Development Budget	13,007,369	320,866,029	36,644,127.	189,431,769
Operating Budget	58,199,400	118,598,460	201,964,500	173,010,791
Maintenance (in operating budget)	n.a	13,538,000	26,182,000	18,238,419
Actual expenditure for maintenance	n.a	6,594,485	16,638,742	16,335,800

Source: Documents submitted by UNIMAS

Note: The amount of the development budget varies year to year as it depends on specific development planning.

To further secure financial foundation, UNIMAS is planning to expand the ratio of its own income within the total revenue up to 30% by 2015. This includes a plan to establish a holding company to facilitate the expansion of profitable academic business such as research and consulting.

3.5.4 Current Status of Operation and Maintenance

The current status of operation and maintenance is good for most of the facilities and equipment.

Some buildings have had rainwater leakage since construction was completed. Sometimes classes or experiments are not conducted as planned due to heavy leakage. Leakage occurs repeatedly in the same parts of buildings even though they have been repaired. UNIMAS believes that this is because the slant of building roofs is not steep enough to prevent leakage. They have already started taking fundamental repair measures by putting in steeper roofs over the existing ones. The budget for repair has already been approved by the Malaysian government. UNIMAS has made a request for structural analysis of construction to a design firm. Except for the leakage, there has been no major problem reported so far.

Some of the equipment, including built-in desks and chairs, cannot be used at four faculties (except FCHD) due to a lack of spare parts or technicians with the appropriate expertise. However, the number of pieces of equipment that cannot be used does not exceed 10 at any faculty and the majority of equipment is utilized in an acceptable condition. Five years have passed since computers were supplied to FIT and FCSHD and UNIMAS are planning to replace them.

Electric power and air conditioners are centrally controlled because this was considered more efficient than to maintain everything individually. Some have commented that this is in fact less efficient or less economical because, for example, rooms that are not in use are also air-conditioned under the centrally controlled system. Actual analysis on energy efficiency was not obtained during the Evaluation.

No major problems have been observed in the operation and maintenance system, therefore sustainability of the project effect is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of the project was to improve the quality and quantity of human resource development of UNIMAS by the construction of facilities for five faculties, the provision of educational equipment, and training and exchange programmes for university staff and students. Thus, the aim was to contribute to the development of human resources who can contribute to the development of Malaysia, thus in turn contributing to the improvement of the economic gap among regions. The objective is relevant with the development plan and development needs of Malaysia at the time of both the appraisal and the Ex-Post Evaluation, therefore its relevance is high. The facilities and equipment provided by the project are essential to education and research at UNIMAS and the number of students has been increasing. Academic staff dispatched to Japan on the Soft Development Programme have utilized the results of the programme and some of them participate in programmes implemented by industrial-academic-government consortia, thus contributing to local society. Therefore, the effectiveness of the project is high considering impact. The outputs of the project are generally relevant, in that the area of the faculty buildings was increased from the original plan but is sufficient to accommodate the increased number of students. However, the project cost was higher than planned and the project period was longer than planned. Therefore, efficiency is fair. The operation and management structure of UNIMAS is well established, without financial problems. Although some parts of the facilities have rainwater leakage, UNIMAS has already taken measures against the problem. Most of the academic and management staff dispatched to Japan on the Soft Development Programme still work at UNMAS. Thus, sustainability is high.

In light of the above, this project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

Repair of facilities and equipment

It is necessary to take measures for the repair of equipment that is not used due to failure. It is also desirable that UNIMAS immediately implement the repair of roofs (which is already under way). It may be useful for UNIMAS to examine the cause of leakage more carefully including the possibility of problems in maintenance other than the structural ones currently discussed.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

(1) Soft Development Programme

The need for the Soft Development Programme in Japan was not very strong. According to interviews, this was because potential participants were concerned about daily life and research in Japan. Providing information on daily life in Japan may help to increase the number of applicants. It should be noted, however, that many researchers in Malaysia are likely to prefer English-speaking countries to Japan. Therefore, it is important that the number of researchers to be dispatched is estimated as precisely as possible, with a comparison with the number of researchers who have been dispatched to foreign countries other than Japan.

In the management and technical programme, visits to several organizations in a short time might have been useful to grasp the overall picture, but they were not very effective to obtain practical knowledge and techniques, due to the limited time for in-depth discussions and questioning. On the other hand, staying in one organization is useful to obtain specific skills such as organizational management and communication, even though the total stay in Japan is the same for both. It is important to plan a practical programme with the targeted organization(s) in accordance with the programme objective.

(2) Information and Needs Analysis of the Target University

To examine impact in higher education projects, it is important that the executing agency has the relevant data on the tracer study of graduates, the research themes of academic staff, and so on. In the tracer studies of UNIMAS, the type of employment of graduates is not identified, which has made it difficult to discern a relation between the students' professions and the project effects. If the executing agency does not have such data, it may be useful to conduct a survey during the project. The data would be useful in examining the impact after project completion as well as in planning similar projects. In conducting a tracer study, it is helpful if the data for graduates is available via an alumni network.

End

Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1. Project Outputs	<p>(1) Building construction (Buildings for five faculties, Chancellery & Administration, Student Colleges, etc.) Total floor area: 105,367m²</p> <p>(2) Infrastructure (road, water supply, drainage, etc.)</p> <p>(3) Equipment (educational equipment)</p> <p>(4) Soft Development Programme (Academic staff, Management staff, etc.) Total: 75 persons</p>	<p>(1) Building construction (Buildings for five faculties, Chancellery & Administration, Student Colleges, etc.) Total floor area: 218,057m²</p> <p>(2) As planned</p> <p>(3) As planned</p> <p>(4) Soft Development Programme (Academic staff, Management staff, etc.) Total: 108 persons</p>
2. Project Period	March 1999 to March 2007 (97 months)	March 1999 to April 2009 (122 months)
3. Project Cost		
Amount Paid in Foreign currency	11,349 million yen	5,750 million yen
Amount paid in Local currency	13,382 million yen (419 million RM)	25,353 million yen (831million RM)
Total	24,732 million yen	31,103 million yen
Japanese ODA loan portion	18,549 million yen	18,403 million yen
Exchange rate	1RM = 31.9 yen (As of December 1998)	1RM = 30.5 yen (Average between March 1999 – April 2009)