

Evaluation Criteria	Evaluation Items		Data Sources	Result
	Main Items	Sub-Items		
Kc		Enhancement of the output by the manpower input of counterpart personnel assigned * same as above captioned	-Project record -Questionnaire -Interview survey	reasonable in this line. - In addition, assignment of international experts on the CBT approach helped significantly to enrich the contents of the project activities.  Ghanaian manpower input - COTVET has made staff recruitment efforts in order to fully function as the counterpart organization for the project. The effort is highly evaluated, though, the gap still exists, and the insufficient number of staffs has lead to multiple workloads onto respective COTVET staff. The counterparts have resulted in facing serious challenges to share their time with the project activities. - It led to fewer chances to provide technical transfer to COTVET, creating another feature of the project as a consultancy service in parallel with the basic concept of technical cooperation project. - The pilot institutions provided sufficient manpower to carry out the project. Their dedication onto the establishment of the training packages was excellent, and contributed to achieve outputs.
		Enhancement of the output by manpower input of external resources assigned * same as above captioned	-Project record -Questionnaire -Interview survey	Other manpower input (local consultants etc) - Local staffs employed by the project contributed to the achievement of the outputs and the project purpose. They functioned to reinforce manpower of COTVET sometimes and to keep monitoring activities along with logistical support for all the activities. - In addition, the manpower input of the CBT expert is also noteworthy as a contributing factor to raise efficiency.
	<u>Input (material and facility)</u>	Enhancement of the output from the viewpoint of material and facility inputs (volume, specification, timing, usability, provided targets)	-Project record -Questionnaire -Interview survey	- The Project provided equipment for training on CBT approach to three pilot institutions. The variety of equipment is evaluated appropriate for training activities, but the arrival of some equipment was delayed due to troubles made by suppliers' side. The procurement problem affected the training schedule in the pilot institutions (A-Poly received the influence most among the three institutions).
<u>Input (training in Japan and the third country)</u>	Enhancement of the output from the viewpoint of training conducted (contents, timing, period, numbers)	-Project record -Questionnaire -Interview survey	- The Project provided training opportunity in Japan and the third country. Training to South Africa and Botswana were for some representatives of COTVET and the pilot institutions. Visits to both countries, South Africa and Botswana, where the CBT approach have been applied for decades gave the participants essential ideas to apply to Ghana. Realization of the effect of the training is expected in the near future (The training was very recently carried out in October	

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				2010). - The Project sent trainees after collected question topics from colleagues. Such prior preparation is evaluated as an effective device to raise the efficacy of the training.
	<u>Input (Budget)</u>	Amount of the project budget	-Project record -Interview survey	- The budget for the project contributed to enhance the project activities from the viewpoint of equipment supply at the workshops of the three pilot institutions in particular - The Ghanaian side also contributed to the necessary costs for daily activities such as local costs.
		Timing to disburse	-Project record -Interview survey	- The timing to disburse was almost appropriate for implementation of the project.
	<u>Duplicated activities</u>	Other projects/programs to conflict or duplicate the activities of the Project's * to see if conflicts exist on the way of TVET approach among donors'	-Questionnaire -Interview survey	- There were different models of CBT implemented by various development partners. The "technical committee on the harmonization of CBT" made significant contribution to coordinate and dissolve the disparities existing in CBT delivery by various TVET institutions with development partners. Owing to the harmonized process, the Project did not encounter serious duplication with other projects.
Impact (To examine the project's effects including the ripple effects in the long term)	<u>Overall goal</u>	Achievement forecast for the overall goal	-Project record -Questionnaire -Interview survey	Overall goal: 1. Increased number of TVET Training Institutions with CBT. 2. Qualification Accreditation System is operational. -Objectively Verifiable Indicator 1) Number of training materials at different levels of the NTVETQF. 2) Number of TVET institutions implementing CBT programmes. 3) Number of Industrial Training Advisory Sub-committee (ITAC Sub-committee) increases in technical areas other than mechanical engineering. 4) By the end of Year 2016, number of trainees who receives CBT increases by 30% from the end of March, 2011. 5) Number of demand-oriented TVET with CBT increases in different sectors other than mechanical engineering. 6) Pass rate of the trainees on each programme continuously kept at 70% and above.  - It is difficult to foresee the achievement of the overall goal as of now since the CBT approach requires an increase in budget allocation and human resource development of facilitators on the CBT approach. The increase in the budget has to depend on external funding sources. Since the possibility is affected significantly by such external condition, it is difficult to predict the

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				<p>achievement of the goal.</p> <p>Although the future picture may be changed, there are positive signs at this moment as follows: the Skills Development Fund (SDF) will soon begin full operation, which may provide chances for TVET institutions to apply the CBT approach; and the AfDB has plans to assist in TVET institutions with the application of the CBT approach.</p> <p>- As to the qualification accreditation system, it is still under discussion with stakeholders. The system will be possibly kept as it is for several years.</p> <p>- From the indicators' viewpoint, most of all the indicators of the PDM will be achieved automatically as long as the number of institutions applying the CBT increases. Only indicator 6: the pass rate; does not have an obvious linkage with the effectiveness of CBT approach. The terminal evaluation mission recommends the exclusion of indicator 6 from the PDM in this line.</p>
	<p><u>Impacts occurred as:</u></p> <p><u>ripple effects</u> (positive and negative)</p>	<p>Aspects as follows:</p> <ul style="list-style-type: none"> <li>• policy,</li> <li>• technical aspect,</li> <li>• environment,</li> <li>• socio-economy,</li> <li>• organization</li> <li>• finance</li> </ul>	<p>-Project record -Questionnaire -Interview survey</p>	<p>[Positive impact]</p> <p>- Communication opportunities with TVET sector and industries have increased through frequent meetings at the standing committees, forums, workshops etc under the Project framework. Tighter relationship with these major stakeholders directly/indirectly gives positive influence to raise the quality of training contents at TVET institutions. In addition, it is expected for TVET institutions more easily to find coupling of trainees and companies for the workplace experience.</p> <p>- Although it is difficult as of now to confirm positive influence onto the increase in job-finding ratio of the graduates because the graduation timing has not yet come, a variety of good reputation is now being collected from companies who received workplace experience. Judging from companies' evaluation on the trainees, it is highly possible for graduates to find jobs at more than national job-finding ratio. The followings are the examples to indicate high evaluation: e.g 1) One of the trainees at welding trade passed the company's exam, which allowed only one candidate to qualify among many applicants. e.g. 2) One of the companies received workplace experience highly evaluated the skills of trainees, and showed strong interest in hiring them after they graduate.</p> <p>- Recognition of CBT approach was extended through various opportunities such as TVET forum and the workshop inviting ECOWAS countries. Tangible effects were not observed yet, though, the recognition expectedly leads to extension of CBT approach and more communication chances with stakeholders not only within Ghana but also the region in the long run.</p>

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Sustainability (To examine the sustainability after the termination of JICA's cooperation)	<u>Policy aspect</u>	<ul style="list-style-type: none"> <li>Prospects of policy direction</li> <li>Prospects of political support to develop CBT</li> </ul>	-Documents of MoE - Documents of COTVET -Questionnaire -Interview survey	<b>[Negative impact]</b> - The evaluation team did not observe any negative impacts.  - Due to the adoption of the COTVET Act, followed by official establishment of COTVET, as well as the adoption of CBT policy as a national policy by the draft TVET policy 2004 and the Education Reforms of 2007, it is highly likely that the policy framework will remain sustainable.
	<u>Organization aspects</u> (regarding the COTVET as an organization that should play key roles)	<ul style="list-style-type: none"> <li>Appropriateness of the organizational structure of COTVET to continue producing the Project outputs</li> </ul>	-Questionnaire -Interview survey	(COTVET) - COTVET would be able to strengthen the sustainability of their organizational aspect if the requested increase in the staffs is realized in accordance with their "employment plan". In other words, the current situation indicates that the sustainability of the organizational aspect is lower, which is one of the most serious challenging issues for COTVET as long as the situation remains with limited number of staffs.  (Pilot institutions) - Under the assumption that the pilot institutions continue the CBT approach at the same trades with the same grade of the pilot project; the three institutions would have enough sustainability in terms of the organization structure with the number of facilitators. However, if a consideration is given to the extension of the CBT approach to other trades and grades, then the sufficiency of facilitators will be raised as a challenging issue because the CBT approach requires more facilitators compared with the traditional.
	<u>Technical aspects</u> (regarding the COTVET as an organization that should play key roles)	<ul style="list-style-type: none"> <li>Capacity of personnel and/or organizations in charge of key activities to produce the Project Outputs</li> <li>Prospects of continuous engagement of these personnel</li> </ul>	-Questionnaire -Interview survey	(COTVET) - Institutionalization for COTVET's tasks has progressed significantly during the project period, but actual implementation in accordance with the institutionalized procedures is now about to step in full operation stage. - From the start up stage towards the full operations stage, the belated reinforcement of manpower at COTVET appear as the challenging issue with regards to technical sustainability because of the fewer chances to transfer skills and experiences from the project. - Although COTVET may be able to expect new and capable manpower to come in later on, the technical sustainability as of now is not high enough.

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				<p>(Pilot institutions)</p> <ul style="list-style-type: none"> <li>- The facilitators in charge of CBT approach have gained enough technical capacity to continue the activities. And as mentioned previously under the organizational aspect, if the institutions seek extension to other grades and/or trades, training to un-experienced facilitators is indispensable.</li> </ul> <p>(Others)</p> <ul style="list-style-type: none"> <li>- One of the challenges for the technical aspect is to secure trainers who can train facilitators on the CBT approach. It is required to develop the system supplying the trainers in stable manner corresponding to requests from TVET institutions. Discussion will be required to develop such system among stakeholders such as whom to take leading roles, how to pool human resource and/or to train them.</li> </ul>
	<p><u>Financial aspects</u></p> <ul style="list-style-type: none"> <li>• Prospects to secure sufficient financial resources to continuously produce project outputs</li> </ul>		<ul style="list-style-type: none"> <li>- Questionnaire</li> <li>- Interview survey</li> </ul>	<p>(COTVET- for extension to other institutions nationwide)</p> <ul style="list-style-type: none"> <li>- The CBT approach requires much more budget compared with the traditional. Judging from the budget forecasts of the Ministry of Education as well as the Ministry of Employment and Social Welfare, to secure sufficient budget for dissemination of the CBT approach is seriously tough.</li> <li>- Positive signs exist from some internal/external funding sources. One of them is the SDF (Skills Development Fund), which is now about to go fully operation. It can be a great potential funding source for TVET institutions. However, since the major aim of the SDF is placed onto promotion of industrial growth and private sector development, the possibility for TVET institutions to apply for funds for the CBT introduction on their own is limited for now, and cannot be measured at this moment.</li> <li>- Another possible fund is the GET Fund. It may also become a great help for TVET institutions, but the question of whether sufficient amounts are available for the TVET sector in particularly the CBT approach still remains unanswered.</li> </ul> <p>(Pilot institutions)</p> <ul style="list-style-type: none"> <li>- The three pilot institutions have financial constraints. Their possible budget, even if including their income generation effort, cannot cover all the necessary cost for the CBT approach. Judging from the current situation, the financial sustainability of the pilot institutions is low</li> </ul>
	<p><u>Social aspects</u></p> <ul style="list-style-type: none"> <li>• Acceptance of local industries and other</li> </ul>		<ul style="list-style-type: none"> <li>- Questionnaire</li> <li>- Interview survey</li> </ul>	<ul style="list-style-type: none"> <li>- As the industries which received trainees from the pilot institutions for workplace experience were pleased with trainees and their technical skills, the receptivity of industries on the CBT</li> </ul>

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		TVET schools		<p>approach is evaluated high.</p> <p>- However, the project experienced difficulties to find industries who could receive trainees for workplace experience. In order to continue workplace experience after the project, an effective system needs to be established to promote matching trainees with industries through the use of trade associations, etc.</p>

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**Annex 5: List of Inputs and Products****(1) Dispatch of Experts**

## 1) Japanese Experts

No.	Title	Name of Expert	Dispatch Period	M/M
1	Chief Advisor/TVET	Yoshiyuki Hashimoto	2007.4.2 - 2008.2.24	10.96
2	Chief Advisor/TVET Management	Kenji Kimura	(1) 2008.4.27 -11.12 (2) 2009.6.1-12.16	(1) 6.67 (2) 2.03
3	Project Administrator/ Institutionalize of TVET Implementing Institutes_	Koji Shimokawa	2007.4.2 - 2007.8.5	4.10
4	Project Administrator	Yoshio Ishiyama	2007.12.4 - 2009.12.3	20.2
5	Electronics	Rikiro Koriyama	2010.1.7-1.31	0.83
6	Welding	Tohru Kawashima	(1) 2010.1.7-3.13 (2) 2010.6.19-8.13 (3) 2011.1.11-2.4	2.7
7	Chief advisor, and Institutionalization	Ryoichi Ozawa	(1) 2010.2.3-13 (2) 2010.3.10-4.6 (3) 2010.6.22-7.17 (4) 2010.11.19-12.16 (5) 2011.2.1-2.27	4.0
8	Occupational Standards, and Accreditation system	Keith Dunbar	2010.4.14-4.29	0.53
9	Qualification Framework, and Quality Assurance	Brent H. Richardson	(1) 2010.7.1-7.20 (2) 2010.9.23-10.10	1.27
10	CBT in Mechanical engineering, and	Tamon Nagai	(1) 2010.2.6-4.3	9.53

	Institutionalization		(2) 2010.6.10-8.13 (3) 2010.9.2-12.4 (4) 2011.1.11-3.12	
11	Electrics / Electronics	Takaharu Seki	(1) 2010.6.23-7.7 (2) 2010.9.6-10.3 (3) 2010.11.1-11.28	2.7
12	Plant engineering	Kenji Yoshida	(1) 2010.6.23-7.7 (2) 2010.9.6-10.3 (3) 2010.11.13-12.11	2.7
13	CBT Training Management, and Monitoring of Output 1	Akiko Nishibuchi	(1) 2010.2.20-5.15 (2) 2010.6.26-7.31 (3) 2010.8.17-10.27 (4) 2010.11.24-12.23 (5) 2011.1.23-3.13	9.13
14	CBT Training Management, and Project monitoring	Kyoko Kojima	(1) 2010.2.3-3.4 (2) 2010.5.9-6.22 (3) 2010.8.7-8.30 (4) 2010.10.6-12.1	5.2
15	Administrative Coordinator	Jutaro Sakamoto	(1) 2010.3.1-3.30 (2) 2010.10.13-10.25 (3) 2011.2.26-3.14	2.0

2) Technical Officers hired in Ghana

No.	Title	Name of Officer	Hired Period	M/M
1	TVET Institutions and Curriculum Development	Stephen TURKSON	2007.4.16 -present	44.73

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2	Training of Trainers and Piloting	Eric ODOTEI	2007.4.26 -present	44.4
3	CBT piloting / Monitoring	Seth Oku ASAMOAH	2010.3.9 -present	12.27
4	CBT specialist for course development (NVTI-PTC)	Stanley NYAKOR	2010.5.1 -present	10.5
5	CBT specialist for course development (ATTC)	Robert DANFUL	2010.5.1 -present	10.5
6	CBT specialist for course development (ATTC)	Veronica MANU	2010.5.1 -present	10.5
7	CBT specialist for course development (A-Poly)	Richard OKWABI	2010.5.1 -present	10.5

## (2) Counterparts' Training in Japan

### 1) Title of Training Course: TVET Management

Course Duration: 9 November, 2008 - 22 November, 2008

No	Name of Participant	Position	Organization
1	Mr. Daniel BAFFOUR-AWUAH	Executive Director	COTVET, MoE
2	Mr. Isaac Kitson Yaovi EZEH	Deputy Director	TVED, GES, MoE

### 2) Title of Training Course: Material Development & Teaching Methods

Course Duration: 3 November, 2008 - 12 December, 2008

No	Name of Participant	Position	Organization
1	Mr. Stephen Onwona ADJAPONG	Assistant Curriculum Development and Research Secretary	NABPTEX
2	Mr. Godwin Adjei Yaw KUDESE	Centers' Coordinator	NVTI
3	Mr. Robert DANFUL	Instructor	ATTC, GES
4	Mr. Philip Kwesi INCOOM	Curriculum Development, Training and Supervision	TVED, GES
5	Mr. Peter Akwasi ATTODBRAH	Head of Technical Examination Unit	TVED, GES
6	Mr. Stephen AGYEMANG	Lecture	Mechanical Engineering Department, Accra

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3) Title of Training Course: TVET Management2

Course Duration: 7 September, 2009 - 18 September, 2009

No	Name of Participant	Position	Organization
1	Mr. Paul Noble Buatsi	Ag. Chief Director	MoE
2	Mr. Nicholas Kwabena Opoku	Chairman	COTVET Board

4) Group Training Course

No	Name of Participant	Position	Organization	Title of Training Course	Course Duration
1	Ameyaw Baafi	Principal	ATTC	Seminar on Training Management Vocational Training Institutions	15 January 2008 -22 February 2008
2	Mr. Awuclu Damani	Instructor	ATTC	Enhancement of Vocational Training	31 August, 2010 - 9 October, 2010
3	Mr. Emmanuel Kabu Oman	Head of Mechanical Engineering Department & Lecturer	Accra Polytechnic	Vocational Training Education Course	November 14, 2010 -December 1, 2010

(2) Counterparts' Training in the third country

Study Trip on CBT/TVET in South Africa and Botswana

Course Duration: 16 October, 2010 -23 October, 2010

No	Name of Participant	Position	Organization
1	Mr. Sampson Dampthey Tetey	CBT Coordinator	COTVET
2	Mr. Kwabena Adu Amaniampong	Informal Sector Coordinator	COTVET
3	Mr. Kofi Yeboah Ntow	Skills Development Fund Manager	COTVET

*D. S. A.*