

Country Name	The Project for Strengthening DAE in Mechanical Technology at Government College of Technology in Punjab Province
Islamic Republic of Pakistan	

I. Project Outline

Background	In May 2014, the Government of Pakistan formulated its long-term development plan, “Vision 2025”, which aimed at transition to a middle-income country by achieving an average annual economic growth rate of 8% and fostering and developing the manufacturing industry. To strengthen the manufacturing industry, there was an urgent need to increase the supply of middle-level technical personnel (e.g., technicians at the foreman level), who could play a leading role in factories, etc. The JICA-supported technical cooperation project titled “The Project for the Development of a Center of Excellence (CoE) for Technical Education” (2008-2013) strengthened the training management cycle (TMC), organizational structure, and employment support system at Government College of Technology (GCT), Railway Road (RR) in Lahore District to develop middle-level technical personnel so that GCT RR could provide education meeting the needs of industry. At GCT Faisalabad (GCT FSD) and GCT RR as CoEs, the project was undertaken to strengthen further the results of the previous project and extend them to other 11 GCTs.		
Objectives of the Project	Through sharing TMC among GCTs and developing improvement plan for introducing the project approach for GCTs, revising curriculum to satisfy the needs of human resource from the manufacturing sector, upgrading facility at GCT FSD, developing Master Trainers at GCT RR and GCT FSD and strengthening industrial linkage, the project aims at improving quality of technical education in DAE ¹ Mechanical Technology courses of GCT RR and GCT FSD based on industrial needs and introduce the approach of the above improvement in other GCTs in the eastern part of Punjab province, thereby strengthening institutional framework for providing quality education at DAE Mechanical Technology of GCTs in the eastern part of Punjab province.		
	1. Overall Goal: Institutional framework for providing quality education is strengthened at DAE Mechanical Technology of GCTs in the eastern part of Punjab province. 2. Project Purpose: Quality of technical education in DAE Mechanical Technology courses of GCT RR and GCT FSD is improved based on industrial needs. The approach of the above improvement (hereunder referred as the project approach) is introduced in other GCTs in the eastern part of Punjab province.		
Activities of the Project	1. Project Site: Eastern part of Punjab province (13 GCTs) ² 2. Main Activities: Sharing TMC among GCTs and developing improvement plan for introducing the project approach for GCTs, revising curriculum to satisfy the needs of human resource from the manufacturing sector, upgrading facility of DAE Mechanical at GCT FSD, developing Master Trainers at GCT RR and GCT FSD, strengthening industrial linkage 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 16 persons 2) Trainees received: 21 persons 3) Equipment: Pillar Drilling Machine, Ultrasonic Flaw Detector, Computer Numeric Control (CNC) Vertical Machining Center, Computer, Electric Arc Welding Transformer, Core Baking Oven, Vernier Caliper Digital, Centrifugal Pump Apparatus, Barometer, Generator, etc. 4) Operation cost Pakistan Side 1) Staff allocated: approx. 30 persons 2) Land and Facility: Three office spaces at Technical Education and Vocational Training Authority (TEVTA) Head Office, GCT RR and GCT FSD, equipment for workshops and labs, etc. 3) Operation Cost		
Project Period	(ex-ante) October 2015 – September 2019 (48 months) (actual) February 2016 – February 2020 (48 months) ³	Project Cost (Japanese side only)	(ex-ante) 650 million yen, (actual) 482 million yen
Implementing Agency	Technical Education and Vocational Training Authority (TEVTA), Punjab Province, Government College of Technology, Railway Road (GCT RR), Government College of Technology, Faisalabad (GCT FSD)		
Cooperation Agency in Japan	O.P.C. Corporation, International Development Center of Japan Inc., Global Development & Management Consultants		

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

▪ Overall Goal Indicator 2 (employment ratio after 1 year of graduation at GCT RR & GCT FSD)

- This indicator was not examined for the students (2020-2023) as “after 1 year of graduation” for them will be September 2024, which is later than the time of this ex-post evaluation.
- This indicator was supplemented by 1) opinions/satisfaction/evaluation by industry on the DAE Mechanical Technology course and

¹ Diploma of Associate Engineering (3-year program)² The project targeted 13 GCTs including GCT RR and GCT FSD out of 19 GCTs in Punjab province. The 13 GCTs are all located in the eastern part of Punjab province. In this report, “11 GCTs” refers to GCTs other than 2 GCTs/CoEs (GCT RR and GCT FSD).³ Although they are 49 months when calculated with both ends in, the actual months are 48 months as originally planned because the Project started on 27 February 2016 and ended on 26 February 2020.

1 Relevance/Coherence
<p>[Relevance]</p> <p><Consistency with the Development Policy of Pakistan at the Time of Ex-Ante Evaluation ></p> <p>The project was consistent with the development policy of Pakistan at the time of ex-ante evaluation. “Vision 2025” aims to increase productivity and add value, and as part of this, plans to expand both the quality and quantity of technical education institutions. In addition, the “National Skills Strategy 2009-2013”, which set out a strategy for the development of Technical Vocational Education and Training (TVET) at the national level, identified (i) employability skills, (ii) access to and equity in educational opportunities, and (iii) quality improvement. One of the basic strategies was to provide the skills required for industrial and economic development and reform the vocational training system to strengthen competitiveness in the global market.</p> <p><Consistency with the Development Needs of Pakistan at the Time of Ex-Ante Evaluation ></p> <p>The project was consistent with the development needs of Pakistan at the time of ex-ante evaluation. To strengthen the manufacturing industry, there was an urgent need to increase the supply of middle-level technical personnel (e.g., technicians at the foreman level), who could play a leading role in factories, etc. as mentioned in “Background”.</p> <p><Appropriateness of Project Design/Approach></p> <p>The project design/approach was appropriate. No problem attributed to the project design/approach was confirmed.</p> <p><Evaluation Result> In light of the above, the relevance of the project is ③⁴.</p>
<p>[Coherence]</p> <p><Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation></p> <p>The project was consistent with the Japan’s ODA policy to Pakistan at the time of ex-ante evaluation. The “Country Assistance Policy for the Islamic Republic of Pakistan” (2012) included strengthening the competitiveness of the manufacturing industry in the priority area “Improvement of Economic Infrastructure”. It also stated that assistance would be provided to achieve industrial diversification and high added value, which would contribute to promoting economic growth and job creation in Pakistan by means including industrial human resources development.</p> <p><Collaboration/Coordination with JICA’s other interventions></p> <p>Any collaboration/coordination between the project and JICA’s other intervention was not clearly planned at the time of ex-ante evaluation or during the project.</p> <p><Cooperation with other institutions/ Coordination with international framework></p> <p>The cooperation/coordination with GIZ (Gesellschaft für Internationale Zusammenarbeit in German) was planned during the project period and implemented as planned, and the positive effect was confirmed at the time of ex-post evaluation. The involvement of GCT’s Institute Placement Officers (IPOs) in the GIZ-led employment support (development of career counselors) was particularly notable. As it was challenging to develop career counselors through the project alone regarding time and cost, the cooperation helped bring good results.</p> <p><Evaluation Result></p> <p>In light of the above, the coherence of the project is ③.</p>
<p>[Evaluation Result of Relevance/Coherence]</p> <p>In light of the above, the relevance/coherence of the project is ③.</p>
2 Effectiveness/Impact
<p><Status of Achievement of the Project Purpose at the Time of Project Completion></p> <p>At the time of project completion, the Project Purpose was achieved as planned. Scores of relevant indicators for “Effectiveness of Teaching Learning Process” and “Job Market Linkages” of DAE Mechanical Technology of GCT RR and GCT FSD exceeded 80% of the national accreditation body National Vocational and Technical Training Commission (NAVTTTC) evaluation criteria (Indicator 1). Improvement Plan for DAE Mechanical Technology of GCTs in the eastern part of Punjab province was approved in July 2019 by the working group consisting of TEVTA and GCTs representatives (Indicator 2).</p> <p><Continuation Status of Project Effects at the Time of Ex-Post Evaluation></p> <p>By the time of the ex-post evaluation, the project effects have been continued. GCT RR and GCT FSD have been accredited by NAVTTTC for both program and institutional criteria. The latest available results of Academic Audit by TEVTA (institute score) show that “Effectiveness of Teaching Learning Process” of both GCTs exceeded 80% and “Job Market Linkages” of GCT FSD was also over 80%. As captured in the achievement of the Overall Goal Indicator 3 below, the Improvement Plan has been implemented at all 13 GCTs, and TEVTA has been monitoring the progress.</p> <p><Status of Achievement of the Overall Goal at the Time of Ex-Post Evaluation></p> <p>At the time of ex-post evaluation, the Overall Goal has been mostly achieved as planned.</p> <p>As for Indicator 1⁵, the target of graduation ratio (GCT RR: 72.5%, GCT FSD: 59.9%) was achieved beyond the plan for the students of 2017-2020 and 2018-2021 sessions at both GCTs due to improvement in teaching and infrastructure resources which could contribute to the improvement in learning performance of students. The target was not achieved for the students of the 2019-2022 session at both GCTs because the COVID-19 pandemic drastically altered students’ education experience, making it difficult for them to attend college and focus on their studies.</p> <p>In regard to Indicator 2, during the passing year from 2019 to 2021⁶ except for 2020 at GCT RR, a higher employment ratio against the target (GCT RR: 50%, GCT FSD: 75%) was achieved due to the quality skill of students and efforts of JPOs. In addition, according to the</p>

⁴ ④ : very high, ③ : high, ② : moderately low, ① : low

⁵ For the students 2020-2023 session, their graduation ratio is not available as the academic calendar of the 3-year DAE program is from September to August.

⁶ Students of passing year 2022 is not fully examined because “after 1 year of graduation” is September 2023, and employment data usually is not collected immediately.

GCT RR & GCT FSD, opinions from industries on the DAE Mechanical Technology course and their students are very positive because of practical training as per the revised curriculum⁷, practice on the latest machinery/equipment provided by the project, training of instructors, etc. Also, JPOs at GCT RR and GCT FSD have been conducting various activities in collaboration with industry for enrolled students such as on-campus recruitment drive, Career Day/job fair, career counseling, etc., and for graduates, follow-up activities such as visiting their offices, confirming the satisfaction of the employers on the graduates' skills, etc.

As for Indicator 3, the implementation of the Improvement Plan is confirmed in the 13 GCTs from the following aspects. (a) Monitoring by TEVTA has been functioning through Academic Audit and Monitoring & Evaluation (M&E) system developed by TEVTA⁸ after the completion of the project. All of reports include wide information such as the quality of education and the status of each GCT. They are used for decision-making including the future plan. This indicates that TEVTA implements TMC. (b) Training of Trainers (TOTs) have been conducted for newly recruited instructors. (c) The revised curriculum of the 6 subjects has also been implemented in the other 11 GCTs. (d) Concrete examples for improvement against the Improvement Plan at GCT RR & GCT FSD are confirmed. (e) Implementation of the Improvement Plan at the other 11 GCTs is confirmed by TEVTA. Regarding NAVTTC accreditation of 11 GCTs, 9 of them are confirmed as currently under valid accreditation. (f) The key equipment procured by TEVTA was largely provided to the other 11 GCTs after the project completion as per the procurement plan developed by the project.

<Other Impacts at the Time of Ex-Post Evaluation>

Positive impacts were confirmed. First, the use of JPO by female students of the Department of Architecture at GCT RR is confirmed as expected at the ex-ante evaluation (A total of 82 female students used JPO between 2020 and July 2023). Second, GCT FSD successfully secured accreditation of Asia Pacific Accreditation and Certification Commission (APACC) (December 16, 2021) with distinction, which is "BRONZE+AWARD". While going through the accreditation process, GCT Mechanical Department team received appreciation and feedback on the quality of the teaching and learning (curriculum, equipment, and trained human resource availability) and sustainability (use of all project manuals as standard operating practices, active linkages with leading industrialists/companies through Institute Advisory Committees (IAC)⁹ and pro-active support to students through JPO). Third, the outputs and experiences of the project (e.g., curriculum revision, industrial linkages, IAC meetings, equipment management manual) have also been introduced in all GCTs, other than the 13 GCTs targeted by this project, in Punjab province. Fourth, a Memorandum of Understanding (MOU) was signed between GCT FSD and a private company on training for employees using skills, knowledge, equipment, etc. brought by the project. No negative impacts were observed.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results			Source																		
(Project Purpose) Quality of technical education in DAE Mechanical Technology courses of GCT RR and GCT FSD is improved based on industrial needs. The approach of the above improvement (hereunder referred as the project approach) is introduced in other GCTs in the eastern part of Punjab province.	Indicator 1: Scores of relevant indicators for “Effectiveness of Teaching Learning Process” and “Job Market Linkages” of DAE Mechanical Technology of GCT RR and GCT FSD are over 80% based on NAVTTC's program and institutional criteria.	Status of the Achievement (Status of the Continuation): achieved as planned (continued) (Project Completion) The results of field surveys at both GCTs exceeded 80% of the national accreditation body NAVTTC evaluation criteria. <table><tr><td>Relevant indicators</td><td>GCT RR</td><td>GCT FSD</td></tr><tr><td>Effectiveness of Teaching Learning Process</td><td>More than 80%</td><td>More than 80%</td></tr><tr><td>Job Market Linkages</td><td>More than 80%</td><td>More than 80%</td></tr></table> (Ex-Post Evaluation) • Both institutes have been accredited by NAVTTC for both program and institutional criteria. The present accreditation is valid for 5 years (GCT RR until October 2025 and GCT FSD until March 2025). Assessment reports are confidential. The accreditation result is not communicated in % but is communicated as “Accredited”. • Reference data: The latest available results of Academic Audit by TEVTA (Institute Score) <table><tr><td>Segments</td><td>GCT RR (conducted in the Academic Audit 2020-2021)</td><td>GCT FSD (conducted in the Academic Audit 2021-2022)</td></tr><tr><td>Effectiveness of Teaching Learning Process</td><td>82%</td><td>84.8%</td></tr><tr><td>Job Market Linkages</td><td>61.6%</td><td>90%</td></tr></table>			Relevant indicators	GCT RR	GCT FSD	Effectiveness of Teaching Learning Process	More than 80%	More than 80%	Job Market Linkages	More than 80%	More than 80%	Segments	GCT RR (conducted in the Academic Audit 2020-2021)	GCT FSD (conducted in the Academic Audit 2021-2022)	Effectiveness of Teaching Learning Process	82%	84.8%	Job Market Linkages	61.6%	90%	Completion Report, Questionnaire & interview with TEVTA, GCT RR and GCT FSD
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	Indicator 2: Improvement Plan for DAE Mechanical Technology of GCTs in the eastern part of Punjab province is approved by the working group of TEVTA and	Status of the Achievement (Status of the Continuation): achieved as planned (continued) (Project Completion) An improvement plan was approved in July 2019 by the W/G consisting of TEVTA and GCTs representatives. (Ex-Post Evaluation) See Overall Goal Indicator 3 (Improvement Plan has been implemented at all 13 GCTs.)																					

⁷ Revised curriculum on the 6 subjects approved by the Inter Board Committee of Chairman (IBCC) / Committee of Chairman and Directors of Technical Education (CCDTE) was introduced from the 1st year of students 2019-2022 session.

⁸ Academic Audit is a comprehensive audit of the institute which is carried out once a year. It is conducted in all 19 GCTs. M&E system is that M&E activities are carried out during the whole academic year regarding course coverage with practical and theory and discipline of the institute in each and every department.

⁹ IAC is a committee of representatives from both GCTs and local industries to discuss the management of the GCTs and the industrial linkages.

	representatives from GCTs.																																																																																	
(Overall Goal) Institutional framework for providing quality education is strengthened at DAE Mechanical Technology of GCTs in the eastern part of Punjab province.	Indicator 1: Maintain graduation ratio (passed/admitted) at the level of baseline data set as average between 2014 and 2016. GCT RR: 72.5%, GCT FSD: 59.9%	Status of the Achievement: mostly achieved as planned (Ex-Post Evaluation) • The target of graduation ratio (GTC RR: 72.5%, GCT FSD: 59.9%) was achieved beyond the plan for the students of 2017-2020 and 2018-2021 sessions at both GCTs due to improvement in teaching and infrastructure resources. • The target was not achieved for the students of the 2019-2022 session at both GCTs because the COVID-19 pandemic drastically altered students' education experience, making it difficult for them to attend college and focus on their studies. GCT RR Graduation Ratio (Target: 72.5%) <table><tr><td>Year*</td><td>Admitted (A)</td><td>Passed (B)</td><td>Left (C)</td><td>Fall (D)</td><td>Passed/Admitted (B)/(A)</td></tr><tr><td>2017-2020</td><td>489</td><td>385</td><td>104</td><td>0</td><td>78.7%</td></tr><tr><td>2018-2021</td><td>508</td><td>415</td><td>88</td><td>5</td><td>81.7%</td></tr><tr><td>2019-2022</td><td>500</td><td>302</td><td>102</td><td>96</td><td>60.4%</td></tr></table> GCT FSD Graduation Ratio (Target: 59.9%) <table><tr><td>Year*</td><td>Admitted (A)</td><td>Passed (B)</td><td>Left (C)</td><td>Fall (D)</td><td>Passed/Admitted (B)/(A) %</td></tr><tr><td>2017-2020</td><td>344</td><td>230</td><td>114</td><td>0</td><td>66.9%</td></tr><tr><td>2018-2021</td><td>299</td><td>195</td><td>103</td><td>1</td><td>65.2%</td></tr><tr><td>2019-2022</td><td>275</td><td>129</td><td>80</td><td>66</td><td>46.9%</td></tr></table> *The 3-year program (Academic year is from September to August.)	Year*	Admitted (A)	Passed (B)	Left (C)	Fall (D)	Passed/Admitted (B)/(A)	2017-2020	489	385	104	0	78.7%	2018-2021	508	415	88	5	81.7%	2019-2022	500	302	102	96	60.4%	Year*	Admitted (A)	Passed (B)	Left (C)	Fall (D)	Passed/Admitted (B)/(A) %	2017-2020	344	230	114	0	66.9%	2018-2021	299	195	103	1	65.2%	2019-2022	275	129	80	66	46.9%	Question naire & interview with TEVTA, GCT RR and GCT FSD																															
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		Indicator 2: Increase in employment ratio after 1 year of graduation from baseline data set as average between 2014 and 2016. GCT RR: 50%, GCT FSD: 75%	Status of the Achievement: achieved beyond the plan (Ex-Post Evaluation) During the passing year from 2019 to 2022 except for 2020 at GCT RR, a higher employment ratio against the target (GCT RR: 50%, GCT FSD: 75%) was achieved due to the quality skill of students and efforts of JPOs. GCT RR Employment Ratio (Target: 50%) <table><tr><td>Passing Year</td><td>Pass Outs** (A)</td><td>Employed (B)</td><td>Self Employed (C)</td><td>Higher Education (D)</td><td>Unemployed (E)</td><td>Untraceable (F)</td><td>Employment Ratio*** (G) %</td></tr><tr><td>2019</td><td>255</td><td>94</td><td>7</td><td>98</td><td>56</td><td>0</td><td>64</td></tr><tr><td>2020</td><td>362</td><td>106</td><td>26</td><td>86</td><td>144</td><td>0</td><td>48</td></tr><tr><td>2021</td><td>396</td><td>147</td><td>19</td><td>78</td><td>152</td><td>0</td><td>52</td></tr><tr><td>(Refere nce) 2022*</td><td>255</td><td>94</td><td>7</td><td>98</td><td>56</td><td>0</td><td>64</td></tr></table> GCT FSD Employment Ratio (Target: 75%) <table><tr><td>Passing Year</td><td>Pass Outs** (A)</td><td>Employed (B)</td><td>Self Employed (C)</td><td>Higher Education (D)</td><td>Unemployed (E)</td><td>Untraceable (F)</td><td>Employment Ratio*** (G) %</td></tr><tr><td>2019</td><td>140</td><td>102</td><td>1</td><td>37</td><td>0</td><td>0</td><td>99</td></tr><tr><td>2020</td><td>234</td><td>198</td><td>0</td><td>36</td><td>0</td><td>0</td><td>100</td></tr><tr><td>2021</td><td>211</td><td>159</td><td>7</td><td>27</td><td>18</td><td>0</td><td>90</td></tr><tr><td>(Refere nce) 2022*</td><td>129</td><td>60</td><td>2</td><td>35</td><td>32</td><td>0</td><td>66</td></tr></table> *Latest data (as of June 2023) before 1 year after graduation. ** The number of Pass Outs is different from the tables of Indicator 1. The difference is due to the data source. Indicator 1 data is the internal data set of GCTs, whereas Indicator 2 data is the TEVTA portal data. Some student's data gets delayed due to some procedural reason. *** Employment Ratio (G)= {Employed (B) + Self Employed (C) } / {Pass Outs (A) – Higher Education (D) – Untraceable (F)}	Passing Year	Pass Outs** (A)	Employed (B)	Self Employed (C)	Higher Education (D)	Unemployed (E)	Untraceable (F)	Employment Ratio*** (G) %	2019	255	94	7	98	56	0	64	2020	362	106	26	86	144	0	48	2021	396	147	19	78	152	0	52	(Refere nce) 2022*	255	94	7	98	56	0	64	Passing Year	Pass Outs** (A)	Employed (B)	Self Employed (C)	Higher Education (D)	Unemployed (E)	Untraceable (F)		Employment Ratio*** (G) %	2019	140	102	1	37	0	0	99	2020	234	198	0	36	0	0	100	2021	211	159	7	27	18	0	90	(Refere nce) 2022*	129	60	2	35	32
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		confirmed. (e) Implementation of the Improvement Plan at the other 11 GCTs is confirmed by TEVTA. Regarding NAVTTC accreditation of 11 GCTs, 9 of them are confirmed as currently accredited. Accreditation of 2 GCTs is currently expired, and the process for renewal will be started in the near future. (f) The key equipment procured by TEVTA was largely provided to the other 11 GCTs after the project completion as per the procurement plan developed by the project. Only some minor equipment is remaining which has no significant impact on the curriculum implementation.	
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3 Efficiency

The project cost was within the plan (the ratio against the plan: 74%) and the project period was as planned (the ratio against the plan: 100%). Cost reductions are mainly attributed to the following factors. First, TEVTA's cost-sharing in the procurement of equipment to GCT FSD contributed to the cost reduction. Although not originally planned, TEVTA strongly intended to bear the burden of some of the equipment procurement. TEVTA's contribution was about 46 million yen. The reduction in the scope is assumed to be another factor. Scope was amended in December 2017 to limit to the 2 GCTs (GCT RR and GCT FSD) from the 13 GCTs for quality improvement in Project Purpose due to the deterioration of the public security environment and else. Although the other 11 GCTs participated in possible activities throughout the project period, the Japanese Project Team was not able to directly visit them to ensure quality improvement as originally designed due to the security situation described above.

	Project Cost (Japanese side only, yen)	Project Period (months)
Plan (ex-ante)	650 million yen	48 months
Actual	482 million yen	48 months
Ratio (%)	74%	100%

Outputs were produced as planned.

In light of the above, the efficiency of the project is ③ by taking into account the reduction in scope of Project Purpose.

4 Sustainability

<Policy Aspect>

“Vision 2025” stated in “Relevance” is still effective at the time of ex-post evaluation. In addition, the “National ‘Skills for All’ Strategy 2019”¹⁰ mentions improving the quality of technical education, bridging the gap between education and industry needs, strengthening institutions, and promoting regional development in the eastern part of Punjab. “Skill for Growth & Development” is the TVET Policy for Pakistan approved in May 2018 and mentions enhancing the quality of technical education, aligning curriculum with industry needs, and strengthening institutional capacity in the eastern part of Punjab.

<Institutional/Organizational Aspect>

The current organizational structure/setting is working to promote and disseminate the activities through the formation of different committees in GCTs such as 1) IAC, 2) College Council, 3) Admission Committee, 4) JPO, 5) Repair and Maintenance Committee, and 6) Project Exhibition. In TEVTA, a Training Wing was established in 2022 which conducts the training needs assessment and then arranges the training. Job placement practice was strengthened during the post-project implementation period (From February 2022 onwards) through the institutionalization of the JPO by hiring the human resources and providing of necessary budget for activities for all the 13 GCTs. TEVTA, GCT RR and GCT FSD have a sufficient number of staff to implement DAE Mechanical Technology course. Current human resources at implementing agencies are comprised of permanent staff. Although the number of Master Trainers decreased due to retirement etc., new instructors have been hired to fill the vacancies as well as trained through TOTs. As for JPO, both GCT RR and GCT FSD have deployed full-time staff and conducting various activities for both students and graduates in collaboration with industry. TEVTA also ensures the formation of IAC for each institute of the 13 GCTs to have a close linkage with industry as well.

GCT	No. of Instructors of DAE Mechanical & Master Trainers*		JPO Staff Currently Deployed	
	No. of Instructors	No. of Master Trainers**	No. of IPOs	No. of Assistant IPOs
GCT RR	23	12 (18)	Full time:1	Full time:4
GCT FSD	16	13 (17)	Full time:1	Full time:9

* Trained by the project and functions as a master trainer at present.

**No. of Master Trainers are included in the No. of Instructor, and figures in the () show the number of instructors judged to have master trainer capabilities during the project.

<Technical Aspect>

The Training Wing of TEVTA organizes training on the provincial level. The Head of the Mechanical Department at GCT also arranges TOT in which experienced instructors impart knowledge and skills to their novice counterparts. TMC manual, equipment management manual, textbooks, and teaching materials (syllabi, slides) renewed based on the training needs assessment conducted during the project have been utilized. According to TEVTA, GCT RR and GCT FSD, all instructors are using lesson plans based on the guidelines in the TMC manual to instruct their students, and they are leveraging the TMC manual and guidelines to create job sheets and deliver effective instruction for their students. The equipment is also consistently utilized for training purposes and maintained through the implementation of preventive maintenance checklists, as outlined in the equipment management manual.

With regards to the next round of curriculum revision scheduled for 2024, although detailed information on improved TNA is not available, TEVTA will constitute subject wise committees for curriculum revision in early 2024 comprising academia, industry, TEVTA HQ and Field staff. These committees will review the current curriculum and then propose recommendations for curriculum improvement which will be incorporated in the revised curriculum through a consultative process and finalized through an internal approval process by TEVTA. This process is expected to be completed within 6 months, i.e., by June 2024.

<Financial Aspect>

TEVTA has secured budgets with the overall regular budget amounts of the Annual Development Program (ADP) and its non-salary operating budgets showing an increase. TEVTA has provided non-salary budgets to all 13 GCTs. The provided budget was reported to be sufficient by GCT RR and GCT FSD. TEVTA has also provided the budgets for JPO staff and their industrial linkages activities at all GCTs. JPO activities are covered by the non-salary operating budget, which is the regular budget source.

¹⁰ An updated version of the “National Skills Strategy 2009-2013”

<Environmental and Social Aspect>

No issue on environmental and social aspect has been observed, and it has not been necessary to take any countermeasures.

<Evaluation Result>

In light of the above, no problem has been observed in terms of the policy, institutional/organizational, technical, financial, and environmental and social aspects of the implementing agency. Therefore, the sustainability of the project effects is ④.

5 Summary of the Evaluation

The project achieved the Project Purpose as planned which was to improve the quality of technical education in DAE Mechanical Technology courses of GCT RR and GCT FSD based on industrial needs. The approach of the improvement was also introduced in the other 11 GCTs in the eastern part of Punjab province. The project also mostly achieved the Overall Goal as planned which was to strengthen the institutional framework for providing quality education at DAE Mechanical Technology of GCTs in the eastern part of Punjab province. The project effects have been continued not only in GCT RR & GCT FSD but extended to other 11 GCTs. Academic Audit and M&E System developed and conducted by TEVTA has been serving to facilitate the continuous improvement at GCTs. As for sustainability, no problem has been observed.

Considering all of the above points, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- TEVTA, GCT RR and GCT FSD have developed strong connections with the industry, which provides the emerging industry human resource requirements, and utilize effectively in the execution of JPO activities through the provision of internships and active engagement in the job fairs. It is recommended for TEVTA, GCT RR and GCT FSD to effectively utilize such information regarding the industrial needs of human resources for the curriculum revision as well. In addition, this institute-industry partnership can be more beneficial for the students if the JPO develops good information/data on the standard “on the job trainings (OJTs)” provided by the industry and makes sure that the basics of the industry-led OJTs are covered through the training at GCT and internships in the relevant company. In this way, the student’s employability prospects and readiness for the job market could be further strengthened and enhanced.

Lessons Learned for JICA:

- The quality of GCT courses and the students' employment ratio have been enhanced by having strong connections with industries such as on-campus recruitment drive, Career Day/job fair, industrial visits, etc. In similar projects, it is recommended to consider strengthening industrial linkages and job placement functions like JPO.



The materials of GCT RR developed by the project



The classroom in GCT FSD (PCs were provided by the project.)