



Technical Assistance Report

Project Number: 45010
Project Preparatory Technical Assistance (PPTA)
December 2012

**Mongolia: Reforms in Technical and Vocational
Education and Training in Mongolia
(Preparing the Skills for Employment Project)**
Financed by the Japan Fund for Poverty Reduction

PROJECT PREPARATORY TECHNICAL ASSISTANCE

A. Justification

1. With a view to improving the employability of technical and vocational education and training (TVET) graduates in priority sectors of the economy, the proposed project will address the following issues: (i) ongoing TVET policy development which has been slowed down by the recent government restructuring; (ii) lack of a skills development strategy to implement key development policies of the government; (iii) insufficient employer and industry engagement in TVET policy development and implementation; (iv) underinvestment in training and professional development of TVET teachers and managers; and (v) students' lack of preparedness, trainability, and career information in secondary and special education schools. Although significant investments have been made in the TVET sector in recent years with the support of development partners and the private sector, those issues have not sufficiently been addressed in part for lack of detailed and focused analyses, and coordinated efforts. Given the circumstances, the project preparatory technical assistance (PPTA), approved by the Government of Japan on 22 November 2012 using the title "Reforms in Technical and Vocational Education and Training in Mongolia," will perform in-depth analyses of the labor market, TVET policies and delivery systems, TVET teacher policies and training programs, partnership arrangements between TVET providers and employer/industry, and interests and capacity of secondary and special education schools to undertake pre-vocational training programs and will recommend policy and project design and operating procedures in preparation for the proposed project. It will also conduct capacity building activities for the executing agency and implementing agencies; consultations with stakeholders; and seminars, workshops, and events for raising public awareness about TVET.

B. Major Outputs and Activities

2. The analyses conducted under the PPTA will lead to the following deliverables which will inform the design and activities of the proposed project:

- (i) **Design and monitoring framework (DMF).** Based on the TVET sector analyses and in consultations with key ministries, agencies, training providers, and industry, the consultants will fully develop the DMF. The consultants will conduct consultative and training workshops for the executing and implementing agencies and other stakeholders on (a) project impact, outcome, outputs, components, and activities; (b) project costs, implementation activities, and timeframes; and (c) problem-tree and objective-tree analyses, and the DMF for each project component and for the project as a whole.
- (ii) **Labor market analysis.** Consultants will conduct detailed studies of the regional labor market of priority sectors of the economy. Based on the results of the labor market studies and in consultation with key ministries, employers and industry, trades and occupations, and skills highly demanded in the labor market of priority sectors which are likely to be inclusive of women, the poor, and vulnerable will be identified for investments.
- (iii) **TVET policy studies.** The studies will inform the development and finalization of key TVET policies. They will include analyses of (a) the NVQF and methodology for developing sector-specific vocational qualifications frameworks in priority sectors; (b) the existing training curriculum and materials for selected trades; (c) equipment, tools, and machines being used by employers and industry in priority sectors and skills and knowledge required to handle them; (d) quality standards

required for TVET providers and courses in priority sectors; (e) costs of implementing CBT&A for selected trades and occupations; (f) adequacy and sustainability of the current TVET funding systems; and (g) data quality, coverage, and integration of the existing labor market information systems. Consultants will perform in-depth analyses and make recommendations for decision makers to be considered under the project.

- (iv) **Institutional capacity assessment.** Given the recent government restructuring which has affected the TVET sector, consultants will carry out analyses of legal, institutional, and regulatory frameworks and assess the capacity of key ministries to manage TVET policy development and implementation, actively engage employers and industry in the process, and coordinate key stakeholders. The consultants will propose workable mechanisms for developing and finalizing TVET policies in partnership with employers and industry. They will develop a capacity building plan for key ministries to be implemented under the project.
- (v) **Industry partnership analysis.** Consultants will review the existing and potential forms of partnerships and contractual agreements between TVET providers and employers/industry in priority sectors. The analysis will identify costs and benefits of engaging in TVET provision for employers and industry and constraints on developing partnership between TVET providers and employers/industry. Based on the analysis, consultants will propose guidelines for selecting TVET providers in priority sectors which will implement CBT&A in partnership with employers/industry.
- (vi) **TVET teacher training study.** The study will review the existing training centers and institutes, programs and modalities, curriculum and materials, and their gender implications for TVET teachers, instructors, directors, and principals in priority sectors. It will also include the recent debates and development of TVET teacher policies especially with regard to qualifications, pre-service and in-service training, performance evaluation, and remuneration. Consultants will develop guidelines on the preparation of individual training plan for each TVET teacher of selected TVET providers. The consultants will also prepare, if necessary, training curriculum and materials for TVET teachers and managers.
- (vii) **Secondary school study.** Consultants will assess capacity of secondary schools to implement pre-vocational training programs for selected trades and occupations. They will also consult key stakeholders in pre-vocational training programs, such as students, parents, teachers, local employers and industry, and local governments. The study will include analyses of learning hours for general education curriculum, teachers and staff's workload, and requirements for teacher training, training materials, tools, and equipment. It will also assess physical and human resource capacity of secondary schools and local governments to establish career guidance units. The consultants will make recommendations for decision makers to be considered under the project.
- (viii) **Special education school study.** Consultants will assess interests and capacity of special education schools to implement pre-vocational training programs for selected trades and occupations in consultation with key stakeholders. The study will include analyses of types of disabilities; potential trades and occupations; special requirements for tools, equipment, and materials; training requirements for special education teachers, in addition to those of learning hours for general education curriculum, teachers, and staff's workload. It will also address motivational problems students with special needs face. The consultants will make recommendations for decision makers to be considered under the project.

- (ix) **Gender action plan and social action plan.** The consultants will carry out interviews, focus group discussions, and surveys among key ministries, TVET students, teachers, school managers, and employers and prepare a poverty and social analysis as well as gender analysis. Specifically, data such as student profiles (gender, age, income levels, occupations, etc.) in the TVET sector, levels of access to TVET and constraints for the unemployed and vulnerable groups, and female enrollment in TVET programs for non-traditional occupations will be analyzed. The assessment will also include analyses of the affordability of TVET, subsidies and other support, and targeting mechanisms for the unemployed and vulnerable groups and for women. Based on the poverty and social analysis and gender analysis, and in consultation with stakeholders and government, and in accordance with the Asian Development Bank (ADB) guidelines, the consultants will prepare a gender action plan and a social action plan. The consultants will also look into issues of involuntary resettlement and indigenous peoples.
- (x) **Economic and financial analysis.** The consultants will assess the economic viability (including cost-benefit and internal efficiency aspects) and fiscal sustainability of the proposed project, supported by a socioeconomic impact assessment of the proposed investment in TVET. The consultants will then prepare the economic and financial analysis report required for the report and recommendation of the President.
- (xi) **Risk assessment and management plan.** The consultants will assess the existing capacity and systems for financial management, procurement, and governance and prepare fiduciary risk assessment reports and risk management plans.
- (xii) **Monitoring and evaluation (M&E) framework.** The consultants will design monitoring tools and mechanisms and develop methodology to collect and analyze relevant data for M&E, taking into account the gender and social equity action plan, guidelines for the competitive bid facility, TVET teacher training plans, labor market outcome surveys, and other documents. The M&E framework will be developed to be used during the project implementation.
- (xiii) **Environmental assessment and measures.** The consultants will assess environmental implications of the project, especially minor civil works carried out under Component 2. An environmental assessment and review framework which will specify requirements for generic environmental management plans will be developed for minor civil works.
- (xiv) **Project administration manual (PAM).** The consultant will prepare the draft PAM which will (a) detail project outputs and activities, actors involved and their roles and responsibilities, and implementation schedules; (b) define the roles and responsibilities of the executing agency, implementing agencies, project steering committee, project implementation unit, and ADB; and (c) specify requirements, rules, and procedures for financial management, procurement, safeguards, gender, and social equity issues, reporting, and M&E. The PAM will be prepared in consultation with the government and ADB and will be agreed initially during the loan-fact finding mission.

3. The major outputs and activities are summarized in Table A4.1.

Table A4.1: Summary of Major Outputs and Activities

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
Conduct labor market analysis	months 1–3	Labor market analysis; trades and occupations in demand identified	month 3
Undertake technical analyses and develop project design; consultation with stakeholders; prepare plans and operating procedures	months 2–5	PAM; DMFs; capacity building plan; guidelines on the selection of TVET providers; guidelines on the preparation of individual training plan; training curriculum and materials; other recommendations	month 5
Conduct fiduciary risk analysis; perform gender and social analyses	months 4–5	Risk assessment and management plan; GAP; social action plan	month 5
Estimate detailed costs; prepare procurement packages	months 4–5	Detailed cost estimates and financing plan; procurement plan	month 5
Perform economic, financial, environmental; conduct stakeholder analysis	months 5–6	Economic and financial analysis; environmental assessment and measures; social marketing campaign strategy	month 6
Develop a M&E framework for the project	months 6	Baseline data; PAM; DMFs	month 6
Hold final stakeholder workshop and training workshops for executing agency and implementing agencies	month 6	Stakeholder workshop; training workshops	month 6
Submit final report and hold final tripartite meeting	month 7	Final report	month 7

DMF = design and monitoring framework, GAP = gender action plan, M&E = monitoring and evaluation, PAM = project administration manual, TVET = technical and vocational education and training.

Source: Asian Development Bank.

C. Cost Estimate and Proposed Financing Arrangement

4. The TA is estimated to cost \$1,000,000 equivalent, which will be financed on a grant basis by the Japan Fund for Poverty Reduction, and administered by ADB. The government will provide counterpart support in the form of counterpart staff, documents, information, and data required by consultants. The detailed cost estimate is presented in Table A4.2.

Table A4.2: Cost Estimates and Financing Plan

Item	Total Cost
Japan Fund for Poverty Reduction^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (17 person-months)	398.5
ii. National consultants (31 person-months)	160.0
b. International and local travel	80.0
c. Reports and communications	29.1
2. Workshops, training, seminars, and conferences ^b	187.4
3. Surveys	30.0
4. Miscellaneous administration and support costs	5.0
5. Representative for contract negotiations ^c	10.0
6. Contingencies	100.0
Total	1,000.0

^a Administered by the Asian Development Bank.

^b Workshops, training, seminars, and conferences

Purpose	Venue
Inception, midterm, and final tripartite meeting workshops	Ulaanbaatar
Training workshops	Ulaanbaatar, provinces

^c Includes the cost of travel and per diem for government observers invited for contract negotiations.

Source: Asian Development Bank.

D. Consulting Services

5. A total of 48 person-months of services (17 international and 31 national) will be engaged. All consultants will be recruited in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). In order to ensure immediate mobilization, 9 person-months of national consulting services will be engaged by ADB on an individual consultant basis. The remaining 17 person-months of international and 22 person-months of national consulting services will be engaged through an international consulting firm. The international consulting firm will be engaged by ADB, using the quality- and cost-based selection method (with quality-cost ratio of 80:20) and simplified technical proposal procedure.

6. The outline terms of references for the PPTA consultants are described in Attachment 1 to Appendix 4.

E. Implementation Arrangements

7. The PPTA will be implemented over 12 months. It will start on 15 January 2013 and will be completed by 15 January 2014. The TA executing agency will be the Ministry of Labor. The implementing agencies will be the Ministry of Labor and Ministry of Education and Science. A project steering committee comprising key ministries and representatives of TVET providers, employers and industry will be established to guide and supervise the TA implementation. Workshops, training, and seminars will be conducted by the consulting firm. The proceeds of the TA will be disbursed in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). The government has been informed that approval of the TA does not commit ADB to finance any ensuing project.

8. The TA reports will be prepared in English and Mongolian. Five copies of each report in English will be submitted to ADB and 10 copies of both English and Mongolian reports will be submitted to the executing agency. The consultants will present the key findings of each report in workshops to be held after the submission of the inception report, midterm report, and draft

final report. The proposed PPTA processing and implementation schedule is listed in Table A4.3.

Table A4.3: Technical Assistance Processing and Implementation Schedule

Major Milestones	Expected Completion Date
Project preparatory assistance approval/concept clearance	November/December 2012
Contract negotiations with consulting firm	January 2013
Mobilization of consulting firm	February 2013
Submission of inception report	After 1.0 month
Submission of interim report	After 3.5 months
Submission of draft final report and project administration manual (PAM)	June 2013
Submission of final report and PAM	Within 2 weeks of receiving the comments
Physical completion	January 2014
Financial closure	March 2014

Source: Asian Development Bank.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. A total of 48 person months of services will be engaged by the Asian Development Bank (ADB) on an individual consultant basis and through a consulting firm. The consulting services engaged on an individual consultant basis will include 9 person-months of national consulting services to ensure immediate mobilization. An international consulting firm will provide 17 person-months of international and 22 person-months of national consulting services to conduct technical, economic, financial, gender, social, and environmental analyses and develop project design. Table A4.1.1 presents a summary of consulting services required.

Table A4.1.1: Summary of Consulting Services Requirements

International Name of Positions	Person-months	National Name of Positions	Person-months
		Consultants Engaged on an Individual Basis	
		Labor economist	9.0
Consultants Engaged through a Consulting Firm		Consultants Engaged through a Consulting Firm	
CBT&A specialist/team leader	7.0	TVET policy and institutional development specialist/deputy team leader	7.0
Industry partnership specialist	1.0	Industry partnership specialist	2.0
LMIS specialist	2.0	TVET equipment specialist	3.0
TVET teacher training specialist	3.0	Secondary education specialist	2.0
Costing specialist/economist	2.0	Special education specialist	4.0
Fiduciary risk management specialist	1.0	Environment specialist	2.0
Gender and social development specialist	1.0	Gender and social development specialist	2.0
Total	17.0	Total	31.0

CBT&A = curriculum-based training and assessment, LMIS = labor market information system, TVET = technical and vocational education and training.

Source: Asian Development Bank.

1. **Competency-based Training and Assessment (CBT&A) Specialist** (international/team leader, 7 person-months)

2. The team leader will coordinate all project preparatory technical assistance (PPTA) activities to promote coherence, and will have the skills and experience to support the development and implementation of CBT&A within a National Vocational Qualifications Framework (NVQF). The role requires that the specialist has at least 10 years of experience with planning and administering curriculum-based training curriculum and material development and curriculum implementation and assessment. The specialist should have a graduate degree in education, training management, business administration, public administration, or other relevant disciplines. The team leader will have prime responsibility for the preparation and design of the project. The team leader will plan and coordinate the activities of the other international and national consultants to ensure that the analyses and reports meet all the requirements in a timely manner. The team leader will work closely with the project steering committee established to guide project formulation. The team leader, with the deputy team leader (DTL), will organize appropriate consultations throughout the process with key stakeholders both within and outside the government to reflect balanced views pertinent to the

development of the technical and vocational education and training (TVET) sector in Mongolia. In addition, the team leader will (i) review, in the light of CBT&A, the existing curriculum and training materials for selected trades and occupations being used or developed with the support of development partners and the private sector; (ii) recommend curriculum and training materials for selected trades and occupations developed on the CBT&A principle for use in the project; (iii) assess the cost of developing and implementing CBT&A for each trade or occupation; (iv) review the current TVET funding systems and their adequacy and sustainability; (v) working with the costing specialist/economist, ensure that all the costs of developing and implementing CBT&A for selected trades and occupations be included in the cost estimates for the project; (vi) recommend quality standards for TVET courses in priority sectors and quality assurance mechanisms; (vii) supported by the other specialists, prepare the monitoring and evaluation (M&E) framework to be used during project implementation, design monitoring tools and mechanisms, identifying the most appropriate methodology and techniques to develop and collect relevant data for M&E purposes; (viii) recommend terms of reference for technical and quality audits of project outputs; (ix) supported by other specialists, develop a social marketing campaign strategy to raise public awareness about industry-driven TVET system development; and (x) put together the feasibility study and design for the project in the format agreed by the government and ADB. The team leader will also ensure timely completion and submission of the following with clearly defined inputs from the team: (i) an inception report and the organization of an inception workshop; (ii) a midterm report and the organization of stakeholder consultation workshops; (iii) a final report and the organization of a final workshop; (iv) a sector assessment for inclusion in the report and recommendation of the President (RRP) by reflecting the latest developments in TVET and lessons learned from international experiences and projects of other development partners and the private sector, and finalized problem-tree analysis; (v) a design and monitoring framework based on findings of the feasibility study and discussions held during stakeholder consultation workshops; (vi) a draft project design document (sections of the RRP and the full PAM); and (vii) a final design document incorporating comments and feedback from the government and ADB.

2. TVET Policy and Institutional Development Specialist (national/deputy team leader, 7 person-months)

3. The DTL will work closely with the team leader in managing the team and in the achievement of all PPTA objectives. The DTL should have at least 7 years of experience in TVET in Mongolia and have a good understanding of modern TVET systems. The DTL is expected to possess a university degree in education, training management, business administration, public administration, and other relevant disciplines. The DTL will have primary responsibility for assessing, in full consultation with key stakeholders, methodologies for developing industry-driven TVET system in priority sectors and capacity of the concerned ministries and TVET managers to manage and coordinate the system. The DTL will (i) review legal, institutional, and regulatory arrangements for the TVET sector, especially with regard to priority sectors; (ii) recommend methodology and procedures for developing sector-specific vocational qualifications frameworks in priority sectors in accordance with the NVQF; (iii) assess capacity of the concerned ministries to manage industry-driven TVET policy development and implementation, actively engage employers and industry in the process, and coordinate key stakeholders; (iv) assess capacity of directors and principals of TVET providers to manage industry-driven TVET development and delivery; (v) develop a capacity building plan for the concerned ministries and TVET managers to be used in the project; (vi) recommend quality standards for TVET providers in priority sectors and quality assurance mechanisms; (vii) assist the costing specialist/economist in preparing cost estimates for the project; (viii) develop methodology and tools for TVET graduates tracer studies to be used in the project; (ix)

contribute to the development of the M&E framework for the project; and (x) contribute to the development of the social marketing campaign strategy.

3. **Industry Partnership Specialist** (international, 1 person-month; national, 2 person-months)

4. The industry partnership specialist will have a university or higher degree in business administration, public administration, or other relevant disciplines and will have at least 7 years of experience in developing industry partnership arrangements in TVET projects. The specialist will (i) review the existing forms of partnerships and contractual arrangements between employers/industry and TVET providers in priority sectors; (ii) assess the possibility of other forms of partnerships and contractual arrangements between employers/industry and TVET providers in priority sectors based on international best practices; (iii) by organizing regional consultative workshops, identify costs and benefits of engaging in TVET provision for employers and industry and constraints on developing partnerships between employers/industry and TVET providers; (iv) design employer satisfaction survey, administer/supervise the survey, and prepare a report of the survey; (v) develop indicators for monitoring employer participation in and satisfaction with TVET systems for inclusion in the design and monitoring framework (DMF); (vi) establish criteria and procedures for selecting TVET providers in priority sectors which will implement CBT&A in partnership with employers/industry, if appropriate, different criteria and procedures for public and private TVET providers; (vii) develop guidelines on the selection of TVET providers in priority sectors, including proposal, planning, and reporting templates, for inclusion in the PAM; (viii) contribute to the development of the M&E framework for the project; and (ix) contribute to the development of the social marketing campaign strategy.

4. **TVET Teacher Training Specialist** (international, 3 person-months)

5. The TVET teacher training specialist will have at least 10 years of practical experience in developing and implementing CBT&A within a NVQF and designing TVET teacher training programs. The specialist will have a graduate degree in education, training management, human resource development, or other relevant disciplines. The TVET teacher training specialist will (i) assess the existing policies for TVET teachers, instructors, directors, and principals in priority sectors; (ii) review the recent debates and development of TVET teacher policies, especially with regard to qualifications, pre-service and in-service training, performance evaluation, and remuneration; (iii) review the existing training centers and institutes, programs and modalities, curriculum and materials, and their gender implications for TVET teachers and managers in priority sectors; (iv) identify and recommend, in full consultation with key stakeholders and in accordance with the existing TVET teacher policies, training centers and institutes, programs, and modalities for TVET teachers in priority sectors; (v) working with the TVET equipment specialist, develop curriculum and training materials for TVET teachers on handling new equipment, tools and machines, and occupational safety for selected trades and occupations; (vi) develop guidelines on the preparation of individual training plan for each TVET teacher in priority sectors for use in the project; (vii) identify and recommend, in full consultation with key stakeholders, training centers and institutes, programs, and modalities for directors and principals of TVET providers responsible for developing and managing partnerships with employers/industry in TVET provision; (viii) assist the costing specialist/economist in preparing cost estimates for the project; (ix) develop indicators for monitoring the improvement of training system capacity for inclusion in the DMF; (x) contribute to the development of the M&E framework for the project; and (xi) contribute to the development of the social marketing campaign strategy.

5. **TVET Equipment Specialist** (national, 3 person-months)

6. The TVET equipment specialist will have a university degree in engineering, mechanics, technology, or other relevant disciplines and will have at least 7 years of experience in handling and/or procuring equipment, tools, and machines used in at least one of priority sectors. The specialist will (i) assess equipment, tools, machines, and facilities being used by employers and industry in priority sectors; (ii) in consultation with employers and industry in priority sectors, develop and recommend a standard list of equipment, tools, machines, and facilities for each selected trade or occupation; (iii) in consultation with employers and industry in priority sectors, collect and/or prepare technical specifications for equipment, tools, machines, and facilities for each selected trade or occupation; (iv) in consultation with employers and industry in priority sectors, identify competencies for handling equipment, tools, machines, and facilities being used by employers and industry; (v) assist the TVET teacher training specialist in identifying appropriate training modalities and developing curriculum and training materials for TVET teachers on handling equipment and occupational safety for selected trades and occupations; (vi) assess needs for upgrading equipment, tools, machines, and facilities of TVET providers in priority sectors; (vii) assist the costing specialist/economist in preparing cost estimates for the project; (viii) recommend appropriate procurement packages of equipment, tools, machines, and facilities; and (viii) recommend appropriate measures for installing, maintaining, and repairing equipment, tools, machines, and facilities.

6. **Labor Market Information System (LMIS) Specialist** (international, 2 person-months)

7. The LMIS specialist will have a graduate degree in economics, statistics, database management, or other relevant disciplines and will have at least 8 years of experience in using and/or developing labor market information and databases, and other management information systems. The LMIS specialist will (i) review the existing LMIS and TVET-related management information systems in terms of data coverage, quality, and integration; (ii) assess data collection and processing methods and tools; (iii) assess capacity of those who LMIS and TVET-related management information systems; (iv) develop a plan for improving the existing LMIS and capacity of those who maintain the systems; (v) assist the costing specialist/economist in preparing cost estimates for the project; and (vi) contribute to the development of the M&E framework for the project.

7. **Secondary Education Specialist** (national, 2 person-months)

8. The secondary education specialist will have a university degree in education, education administration, public administration, or other related disciplines and will have at least 7 years of experience in teaching in secondary schools and/or managing/administrating secondary education programs including (pre-) vocational training programs. The specialist will (i) hold consultation with key stakeholders in pre-vocational training programs, such as students, parents, teachers, local employers and industry, and local governments to identify interests, problems, potential conflicts, and resistance; (ii) review secondary education curriculum, teaching-learning hours, and teachers and staff's workload; (iii) assess physical and human resource capacity of secondary schools and communities to implement pre-vocational training programs; (iv) study needs for teacher and manager training, training materials, tools, and equipment to implement pre-vocational training programs; (v) assess physical and human resource capacity of secondary schools and local governments to establish a career guidance unit; (vi) develop a plan for developing and implementing pre-vocational training programs and career guidance in secondary schools; (vii) assist the costing specialist/economist in preparing

cost estimates for the project; (viii) contribute to the development of the M&E framework for the project; and (ix) contribute to the development of the social marketing campaign strategy.

8. Special Education Specialist (national, 4 person-months)

9. The special education specialist will have a university degree in education, special education, education psychology, or other related disciplines and will have at least 7 years of experience in teaching in special education schools and/or managing/administering special education programs including (pre-) vocational training programs for students with special needs. The specialist will (i) hold consultation with key stakeholders in pre-vocational training programs, such as students and adults with special needs, parents, teachers, local employers and industry, and local governments to identify interests, problems, potential conflicts, and resistance; (ii) study special needs of students in terms of physical and psychological support, teaching-learning aids, tools, equipment, and materials; (iii) study trades and occupations of adults with special needs; (iv) review special education curriculum, teaching-learning hours, and teachers and staff's workload; (v) assess physical and human resource capacity of special education schools and communities to implement pre-vocational training programs; (vi) study needs for teacher and manager training, training materials, tools, and equipment to implement pre-vocational training programs; (vii) recommend appropriate pre-vocational training and motivational programs for students with special needs; (viii) develop a plan for developing and implementing pre-vocational training and motivational programs in special education schools; (ix) assist the costing specialist/economist in preparing cost estimates for the project; (x) contribute to the development of the M&E framework for the project; and (xi) contribute to the development of the social marketing campaign strategy.

9. Costing Specialist/Economist (international, 2 person-months)

10. The costing specialist/economist will have a degree in accounting, economics, business administration, or other relevant disciplines and will have at least 5 years of experience in costing education and/or training projects and conducting economic and financial economic analysis, strong quantitative skills and familiarity with using Costab or Microsoft Office Excel. The costing specialist/economist will (i) identify all expenditure items by component, by expenditure category, and by year, in consultation with the other specialists; (ii) estimate the cost of each expenditure item over the project implementation period, based on an international/national unit cost and by taking into account price increase; (iii) project funds flow and disbursement over the project implementation period; (iv) develop detailed cost estimates and financing plans for the project for inclusion in the RRP and PAM; and (v) prepare an economic analysis and a financial analysis of the project by assessing the economic viability (including cost-benefit and internal efficiency aspects) and fiscal sustainability of the project for inclusion in the RRP.

10. Fiduciary Risk Management Specialist (international, 1 person-month)

11. The fiduciary risk management specialist will have at least 8 years of experience in conducting fiduciary risk assessment in projects financed by multilateral development banks and will preferably have an accountant qualification. The specialist will (i) assess the existing systems of fund releases, cash flow management, financial reporting, internal control, and procurement in the executing and implementing agencies; (ii) evaluate the capacity of the executing and implementing agencies with regard to financial management, internal control, procurement, staffing requirements and skills, accounting hardware, software, and training

needs; and (iii) prepare a risk assessment and risk management plan for inclusion in the RRP and PAM.

11. Environment Specialist (national, 2 person-months)

12. The environment specialist will have a university degree in environmental engineering, environmental management, and other relevant disciplines and will have at least 7 years of experience in environmental assessment and management with familiarity of ADB's environmental safeguard policy and compliance requirements. The specialist will review the project's environmental implications, and develop an environment assessment and review framework which will specify requirements for generic environmental management plans (EMPs), identifying all potential environmental impacts related to minor modifications of existing buildings, and defining required mitigation measures. The consultant will help the executing agency in (i) defining procedures for sub-project screening and selection, (ii) development and approval of site-specific EMPs, and (iii) EMP compliance monitoring. The consultant will assess the capacity of the executing agency, the implementing agencies, and the project implementation unit for environmental management, monitoring, and supervision, and recommend required institutional strengthening and capacity building measures. The consultant will prepare environment safeguards related contract clauses for civil works, and prepare the required RRP appendixes.

12. Gender and Social Development Specialists (international, 1 person-month; national, 2 person-months)

13. The gender and social development specialists will have a university or higher degree in development studies, economics, sociology, or other relevant disciplines and will have at least 10 years of experience (for international) or 7 years of experience (for national) in conducting gender analysis, and poverty and social analysis. The gender and social development specialists will conduct poverty and social analysis and gender analysis to (i) establish a profile of students and their families (gender, age, income levels, occupations, etc.), teachers, and the labor market; (ii) identify the beneficiaries, social benefits, and risks of the project; (iii) identify and assess barriers to access to TVET and job placement, particularly for women, the unemployed, and vulnerable groups and examine ways in which the project may promote their access to TVET such as subsidies and other support for the unemployed and vulnerable groups and for women who seek to enroll in TVET programs for non-traditional occupations; (iv) assist the team leader in mainstreaming of gender in the sector assessment and project design; (v) support the team leader and the DTL to ensure that women, the unemployed, and vulnerable groups be adequately involved in stakeholder consultations and in the project design; (vi) prepare the summary poverty reduction and social strategy; (vii) develop a gender action plan and a social action plan with recommendations for appropriate TVET activities and procedures for the project to encourage the participation of women and social inclusion in industry-driven TVET programs; (viii) develop indicators for monitoring access to TVET for the poor and vulnerable for inclusion in the DMF; (ix) contribute to the development of the M&E framework for the project; (x) contribute to the development of the social marketing campaign strategy; (xi) assess the project's implications for issues of involuntary resettlement and indigenous peoples;¹ and (xii) prepare safeguards plans, if required, based on the result of the assessment.

¹ The project's initial safeguard categorizations for involuntary resettlement and indigenous peoples are "C".

13. **Labor Economist** (national, 9 person-months)

14. The labor economist will possess a graduate degree in economics and will have significant experience in researching labor market issues. The labor economist will consult with national and regional stakeholders in priority sectors and identify trades and occupations, and skills demanded in the labor market of each region. The identified trades and occupations are expected to have high labor absorption capacity, while the identified skills are expected to be transferable across trades and occupations. Specifically, the labor economist will (i) collect and analyze data on labor supplies and demands in priority sectors by trade/occupation, by region, by age group, and by gender, using the existing TVET data, labor market information, labor force statistics; (ii) hold consultations with key stakeholders in priority sectors in all the regions of Mongolia; (iii) conduct focus group discussions to identify trades and occupations demanded by small-and medium-size enterprises, ones that can be taken up by women, youth, the unemployed, and vulnerable groups including youth and adults with special needs; (iv) prepare a paper which includes detailed studies of the regional labor markets in priority sectors (in terms of trades and occupations, skills, age groups, genders, the unemployed, and vulnerable groups) and recommendations for trades and occupations, and skills in demand in the regional labor markets to be supported in the project; and (v) prepare a short technical note on the quality and coverage of the existing data related to labor supplies and demands.