

トルコ国
国民教育省（MoNE）
トルコ国際協力調整庁（TIKA）

トルコ国
中央アジア・中東向け
自動制御技術普及プロジェクト
事業完了報告書

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略語表

略語	正式名	日本語
CFT	Country Focused Training	国別研修
CP	Counterpart	カウンターパート
FA	Factory Automation	ファクトリーオートメーション
GDTVET	General Directorate of Technical Vocational and Education and Training	技術教育・職業訓練総局
GI	General Information	コース要覧
GT	Group Training	合同研修
IAT	Industrial Automation Technology	産業自動化技術
ID	Instructional Design	インストラクショナル・デザイン
JCC	Joint Coordination Committee	合同調整委員会
KNSIHS	Konak Nevvar Salih İşgören Hotel Management and Tourism Vocational High School	イスギョレン観光専門高校
M/M	Minutes of Meeting	会議議事録
MoNE	Ministry of National Education	国民教育省
MZHS	Mazhar Zorlu Vocational and Technical Anatolian High School	マズハルゾルル工業高校
OJT	On the Job Training	オン・ザ・ジョブ・トレーニング
PDM	Project Design Matrix	プロジェクト・デザイン・マトリックス
PLC	Programmable Logic Controller	制御装置
PO	Plan of Operation	作業工程表
R/D	Record of Discussion	政府間合意文書
SPREAD	The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department	産業自動制御技術教育普及計画強化プロジェクト
TCTP	Third Country Training Program	第3国研修
TIKA	Turkish Cooperation and Coordination Agency	トルコ国際協力調整庁
TOT	Training of Trainers	トレーナー訓練
TTC	Teachers Training Center	教員研修センター
TVET	Technical and Vocational Education and Training	技術教育・職業訓練
WBTS	Web-Based Training Support System	ウェブベース研修支援システム

要約

1. プロジェクトの背景

JICA とトルコ共和国の国民教育省（MoNE）は、技術協力プロジェクトを通して、2001 年より職業技術教育分野における産業自動制御技術（IAT）の導入と拡大に力を入れてきた。第 1 フェーズ（2001～2006 年）においては、「自動制御技術教育改善計画」として、アナトリア職業高校への IAT 学科導入に関する技術支援が行われた。その後、第 2 フェーズ（2007～2010 年）において、「自動制御技術教育普及計画強化プロジェクト」が実施され、IAT 教育が全国 20 校に普及、拡大された。このような背景から、2011 年 11 月 28 日に MoNE、JICA、トルコ国際協力調整庁（TIKA）は R/D に調印し、本プロジェクトが開始された。本プロジェクトの目的は、中央アジアと中東の職業技術校教員に対し、トルコが第 1・2 フェーズで培った経験と知識の技術移転を支援するものである。

2. プロジェクトのフレームワーク

本プロジェクトは、IAT 技術教育と職業訓練能力の向上に関するトルコの技術を、アゼルバイジャン、カザフスタン、パキスタン、ウズベキスタン、アフガニスタン、キルギス、パレスチナ、タジキスタン、トルクメニスタンの 9 カ国に対して移転することを目的としている。このうちアゼルバイジャン、カザフスタン、パキスタンは国別研修(CFT)、その他の国については合同研修（GT）の対象である。実施機関は、MoNE、JICA、TIKA である。プロジェクトサイトは、イズミール市にあるマズハルゾルル工業高校（MZHS）の教員訓練センター（TTC）である。

3. プロジェクトの達成度

プロジェクトチームは、第 5 回合同調整委員会（JCC）で承認されたプロジェクト・デザイン・マトリックス（PDM）第 2 版の指標に基づき、以下のようにプロジェクトの達成度を分析した。

コンポーネント	指標	達成度
プロジェクト目標： 対象国教員の IAT に関する技術教育・ 職業訓練能力が向上 する。 国別研修対象国： カザフスタン	指標 A-1 技術教育・職業訓練にかかわる管理職が IAT 導入の手順と方法を理解している。	(A) 達成
	指標 A-2: 最低 4 校の技術教育・職業訓練校が IAT 導入のためのパイロット校として選定される。	(A) 達成
	指標 A-3: それぞれのパイロット校から最低 3 人の（カザフスタン人の）教員がチームとして、IAT 基礎・中級コースの研修を指導できるようになる。	(A) 達成
	指標 A-4: （パイロット校にて）TTC での研修を基に IAT 基礎プログラムが開発される。	(A) 達成
国別研修対象国： パキスタン	指標 B-1: 技術教育・職業訓練にかかわる管理職が学校への IAT 導入の手順と方法を理解している。	(A) 達成
	指標 B-2: TTC での研修のため、3 つ以上の教育機関が選ばれる。	(A) 達成
	指標 B-3: 10 人の（パキスタン人の）教員が TTC の基礎・中級・上級コースにて研修を受ける。	(A) 達成
国別研修対象国： アゼルバイジャン	指標 C-1: 技術教育・職業訓練にかかわる管理職が学校への IAT 導入の手順と方法を理解している。	(A) 達成
	指標 C-2: 最低 1 校の IAT 導入のためのパイロット校が選定される。	(E) 未達成 (2013 年 11 月の第 5 回 JCC において対策が設定された)
	指標 C-3: 20 人の教員が TTC にて IAT 基礎コースを受講する。	(C) 中程度
合同研修プログラム	指標 D-1: 技術教育・職業訓練にかかわる管理職が、IAT 導入の重要	(C) 中程度

	性を認識している。	
	指標 D-2: 対象国各国 10 人が TTC の IAT 基礎コースにて研修を受ける。	(C) 中程度
成果: 成果 1: 対象国の研修が適切に計画される。	指標 1-1: 国別研修の対象国別に適切な研修目標が設定される。	(B) 高い
	指標 1-2: 合同研修の適切な研修目標が設定される。	(A) 達成
	指標 1-3: 国別研修の適切な研修計画が作成される。	(A) 達成
	指標 1-4: 合同研修の適切な研修計画が作成される。	(A) 達成
成果 2: ターゲットグループに対して効果的に研修が実施される。	指標 2-1: 70%の国別研修・合同研修の参加者が研修内容、研修運営、宿泊サービスについて満足している。	(A) 達成
	指標 2-2: 80%以上の国別研修参加者が 70%の学習成績を達成する。	(B) 高い (4 コース中 3 コースで目標に到達)
	指標 2-3: 80%以上の合同研修参加者が 70%の学習成績を達成する。	(A) 達成
成果 3: フォローアップシステムが構築される。	指標 3-1: ウェブベースの情報システムが構築され、インストールされ、研修コースに於いて導入される。	(A) 達成
	指標 3-2: 国別研修対象国について、2 年次と 3 年次に研修効果が適切に評価され、改善点が提案される。	(C) 中程度
	指標 3-3: 合同研修対象国について、2 年次と 3 年次に研修効果が適切に評価され、改善点が提案される。	(C) 中程度

4. プロジェクトにおける活動

プロジェクトで実施した主な活動を以下に示す。

- (1) 国別研修対象国に対するニーズ調査を実施した (2012 年 5 月～6 月)。
- (2) 研修カリキュラムの作成: 国別・合同研修用 IAT 基礎、中級、上級コースに対する新たな研修カリキュラムが作成、検証、改善された。
- (3) 教材の作成: トルコ語 IAT 基礎用テキストの作成と英語・ロシア語への翻訳、IAT 紹介ビデオ、一般的な工場の生産ラインにおける自動制御システム図のパネルを作成した。
- (4) 研修実施: 3 年間で合同研修 6 回、国別研修 9 回実施。合同研修 51 人、国別研修 87 人、合計 138 人が参加した。
- (5) 参加者のフォローアップ: ウェブベース研修支援システム (WBTSS) が開発され、E メールベースのモニタリングが行われ、参加者の帰国後の活動を支援した。

5. プロジェクトの成果と教訓

(1) プロジェクトの成果

プロジェクト実施による効果と成果を以下に示す。

● 研修による参加国での波及効果

3 年間のプロジェクトによって 9 カ国から合計 138 人の職業訓練に関わる教員や校長・管理職が、トルコにおいて IAT の研修に参加した。パキスタンとカザフスタンでは、本プロジェクトで培った知識と経験をもとに IAT コースが開講された。

● 質の高い研修プログラムが開発された

IAT やインストラクショナル・デザイン (ID) に関わる日本の第一人者が、本プロジェクトにおいて短期専門家として指導を行い、TTC のトレーナーの知識や技術が向上した。

● トルコ語、英語、ロシア語の教材が開発された

新しい IAT 基礎コースの教材が開発され、3 カ国語の教材としてまとめられた。これにより TTC は、これらの言語を用いる国からの研修受け入れが、いつでも可能となった。

- **高度な専門性を備えたトレーナーが育成された**

研修プログラムの作成、実施、評価、改善などの開発サイクルを TTC トレーナー自身が行ったことにより、質の高い研修プログラムを提供できるレベルに達した。

- **最新の IAT の教育システムの導入**

3 年間のプロジェクトにおいて、研修プログラムの質を高めるために JICA から最新の日本製 IAT 教育システム（機材）が供与された。このシステムを活用することにより、短期間で IAT に関わる包括的な知識とスキルを効果的に学習することが可能となった。

- **産業自動化を活用している工場との連携**

3 年間のプロジェクトにおいて、イズミール、マニサ、ブルサ、イスタンブールの工場と提携して協力関係を築き上げた。特にマニサの工場とは産業自動化に関わる教材の共同開発の合意も取り付け、実施することができた。

- **大学や企業との連携**

プロジェクトの活動によって、大学や民間企業などとのネットワークが構築された。

(2) プロジェクトによって得られた教訓

3 年間のプロジェクト活動から得られた反省や教訓を以下に示す。これらを用いることにより、TTC の今後や他のプロジェクトに役立つことが期待される。

- **国別研修プログラムについて**

国別研修対象国に対するニーズ調査は、それぞれの国の実態に合わせたコース戦略を設定するとともに、対象国のコミットメントを取り付けるために非常に有用であった。同じ対象者に対して 3 年間継続的に訓練することにより、TTC トレーナーは日本人専門家とともに受講者への段階的な知識技術の移転を行うことができた。受講者も翌年のコース受講の条件なので、学んだ知識や技術をコース終了後に自国で共有することにコミットし、インパクトの高い成果へとつながった。参加者の帰国後のフォローアップでも有効であった。

- **合同研修プログラムについて**

教育やカリキュラムの状況が各対象国によって異なるため、受講者の選定は共通の条件だけではなく、ある程度各国の現状を考慮する必要がある。また、初回のコースでは参加者の言語の違いが、効果的な研修やフォローアップで障害となったため、2 回目以降のコースでは言語別コースに切り替えた。

- **WBTS を用いたフォローアップについて**

パキスタンなどでは WBTS が有効に活用されたが、その他の国々では WBTS に組み込まれた自動翻訳システムや IT 環境、教育レベルの違いなどにより、活用が制限された。

- **対象国における IAT のニーズについて**

ニーズ調査や研修実施により、IAT 教育は各国によってニーズに違いがあることが分かった。

1. プロジェクトの概要

1.1 プロジェクトの背景

トルコでは 1990 年以降の製造業の急速な拡大に伴い、製造業技術者、特に中堅技術者の質的・量的ニーズを満たすことが急務とされ、これら人材育成がトルコ政府の開発計画の重点課題に挙げられてきた。こうした政策を受けて教育システム向上の取り組みを進めてきたが、さらなる人材育成強化の必要性が指摘されていた。

こうしたなかでトルコ国民教育省（Ministry of National Education : MoNE）と JICA は 2001 年から 2006 年まで、技術協力プロジェクト「自動制御技術教育改善計画」を実施し、アナトリア職業高校イズミール校を拠点校、コンヤ校を普及校として設置し、それらの工業高校の教員に対する本邦研修受け入れや IAT 教育プログラムの開発と訓練を実施した。

セクターのニーズに応えた上記のプロジェクトの成功を活かす形で、国民教育省はイズミール校、コンヤ校の他に、アナトリア職業高校 19 校にも IAT 学科を新設して計 21 校に増やすとともに、2006 年にはそれら工業高校の IAT 部門の教員育成を目的として、イズミールのマズハルゾルル工業高校に教員研修センター（Teachers Training Center: TTC）を設立した。

さらに国民教育省の技術教育・職業訓練総局（GDTVET）は 2007 年、JICA とともに「自動制御技術教育普及計画強化プロジェクト」（SPREAD）を開始し、TTC を核とした国内における IAT 教育の普及体制を整え、TTC において教員らの訓練を行った。

これらの活動の成功を受けてトルコ・日本の両政府は、これまでのプロジェクトにおいて培った知識や経験を、中央アジアや中東地域の国々の職業訓練校教員らに広く共有することを目的として 2011 年 11 月 28 日に、MoNE、JICA、TIKA により、本プロジェクトの R/D が締結された。

1.2 プロジェクトの枠組み

2011 年 11 月に締結された R/D に基づくプロジェクトの基本的な枠組みは以下のとおりである。

（1）スーパーゴールと上位目標

スーパーゴール：対象国で IAT に関する人材が育成される。

上位目標：対象国の IAT に関する技術教育・職業訓練能力が向上する。

（2）プロジェクト目標

対象国教員の IAT に関する技術教育・職業訓練能力が向上する。

（3）期待される成果

成果 1：ターゲットグループの研修が適切に計画される。

成果 2：ターゲットグループに対して効果的に研修が実施される。

成果 3：フォローアップシステムが構築される。

(4) プロジェクトサイト

プロジェクトサイトは、イズミールのマズハルズルル工業高校（MZHS）の附属施設である教員研修センター（TTC）である。

(5) 対象国

アゼルバイジャン、カザフスタン、パキスタン、ウズベキスタン、アフガニスタン、キルギス、パレスチナ、タジキスタン、トルクメニスタンの9カ国。

(6) プロジェクト実施に関連する政府機関・組織など

国民教育省の技術教育・職業訓練総局が本件の実施機関であり、JICA のカウンターパート（CP）となる。研修プログラムの実務については、TTC のトレーナー達が日本人専門家の CP として共同で行う。TIKA はトルコ側の協力機関としてプロジェクト実施に必要な支援を提供する。

(7) 受益者

直接的受益者は、対象国の職業訓練機関において IAT 関連科目を指導する教員。
間接的受益者は、対象国の職業訓練機関の学生。

1.3 実施体制

プロジェクトの実施体制を図 1.1 に示す。TTC は国民教育省の管理のもとでプロジェクトの中核的な役割を担う。国民教育省は TIKA と調整し、ニーズ調査の実施、受講者の募集・応募手続き、フォローアップなどを対象国の TIKA 在外事務所の助けを借りて実施する。

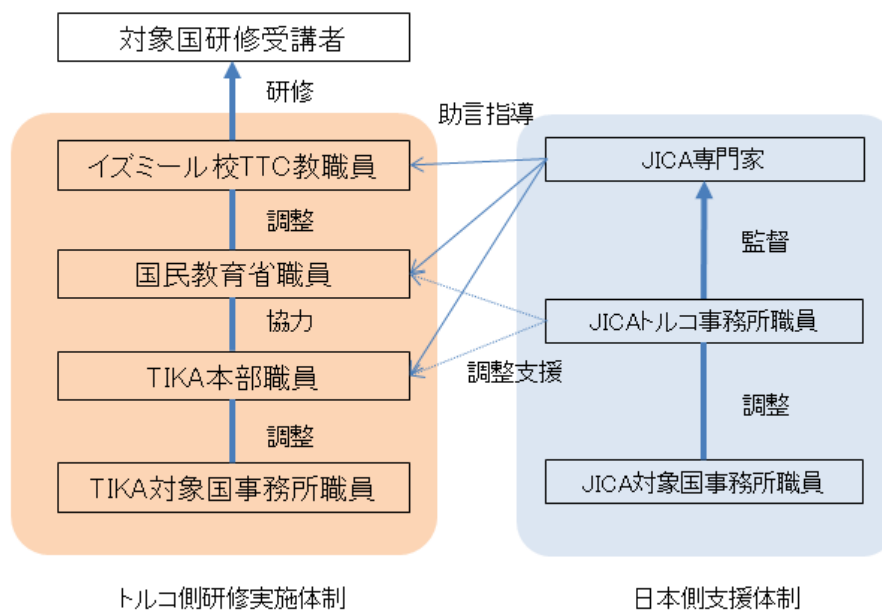


図 1.1 プロジェクト実施体制

JICA の専門家は、JICA トルコ事務所の監督のもと、TTC トレーナー、MONE 職員、TIKA 職員に対して国際研修プログラムを実施するために必要な助言指導を行う。JICA トルコ事務所は MoNE や TIKA と必要な調整や支援を行い、必要に応じて対象国の在外事務所の支援について調整する。R/D で合意し、JCC において修正された各関係者の役割分担を表 1.1 に示す。

表 1.1 関係者の役割分担

組織	役割と責任範囲	投入
TTC (教員研修センター)	<ul style="list-style-type: none"> • プロジェクトのフレームワーク内での研修実施計画の作成 • 研修の実施 <ul style="list-style-type: none"> ◇ 研修対象、カリキュラム、研修内容、研修教材の分析 ◇ 研修内容と研修教材の開発 ◇ 研修に必要なロジスティックスの手配・調整 ◇ 講義と視察研修の実施 ◇ 研修実施報告書の取りまとめ ◇ 研修員に対するモニタリングの実施 ◇ 帰国研修員に対するフォローアップ ◇ 研修員の初期選定 	<ul style="list-style-type: none"> • アナトリア職業高校イズミール校の校長が「プロジェクトマネージャー」として、研修監理と技術的責任を負う • カウンターパート、事務職員 • 研修を指導する講師、インストラクター • JICA 専門家の活動に適した事務所と資機材の提供 • トルコ側が所有する必要資機材（車両、工具、付属品、交換部品等を含む）の提供や交換 • プロジェクト実施に必要な光熱水費や他の基本的な経費 • プロジェクトに必要なデータや情報 • JICA 専門家が医療サービスを受けるために必要な情報と支援
MoNE (国民教育省)	<ul style="list-style-type: none"> • プロジェクト全体についての責任を負担 • ステイクホルダー間の全体調整 • 対象国にあるトルコ在外公館を含む関係者と必要に応じて調整 • 研修員の選定過程の監督と選定結果の承認 	<ul style="list-style-type: none"> • 技術教育・職業訓練総局の局長が「プロジェクトディレクター」としてプロジェクト全体の責任を負う • 技術教育・職業訓練総局の担当部長が「副プロジェクトディレクター」としてプロジェクトマネージメントの責任を負担 • カウンターパートの配置 • 国民教育省におけるプロジェクトの運営経費確保 • 研修実施にかかる経費（会議費、資料作成費、他）の予算確保
TIKA 本部	<ul style="list-style-type: none"> • MoNE、TTC、JICA、TIKA 現地事務所(PCOs)との調整 • 研修実施の支援 <ul style="list-style-type: none"> ◇ 実施要領(GI)の作成 ◇ 対象国の情報収集と TTC への情報提供 ◇ TIKA 現地事務所が収集した対象国の現状、帰国した研修員からのフィードバック、研修ニーズ等について TTC へ情報をフィードバック ◇ 研修員の選定に必要なロジスティックスの調整支援 ◇ 研修員の選定に参加 ◇ 合意された範囲内での研修に必要なロジスティックス支援 	<ul style="list-style-type: none"> • 国別研修対象国で実施する合同ニーズ調査のトルコ側参加者にかかる費用 • 研修受講者の招待に関わる経費（航空券、交通費、日当、宿泊費、健康保険、消耗品費）
TIKA 在外事務所	<ul style="list-style-type: none"> • 研修実施に必要な対象国との調整 <ul style="list-style-type: none"> ◇ 適切な研修員の選定に必要な調整 ◇ GI の配布と研修員の募集 ◇ 対象国政府への選定結果の通知 ◇ 研修員への派遣前準備支援とオリエンテーションの実施 ◇ 対象国の現状、帰国研修員からのフィードバック、研修ニーズ等に関する情報収集 ◇ 帰国研修員に対するフォローアップのフォ 	

	ーカルポイント（現地窓口）	
JICA専門家	<ul style="list-style-type: none"> MoNE、TTC、TIKA に対し、ファシリテーションや技術的な助言・指導を通じたプロジェクトの全体的な支援 合意された範囲内で技術的な講義を実施し、研修の実施支援 研修員の選定に参加 	
JICA トルコ事務所	<ul style="list-style-type: none"> MoNE、TTC、TIKA、JICA 専門家チーム、JICA 在外事務所との調整 	<ul style="list-style-type: none"> JICA 専門家の派遣（総括/研修マネジメント/カリキュラム開発 1、カリキュラム開発 2、業務調整/研修マネジメント補助、他短期専門家） 国別研修対象国で実施する合同ニーズ調査の JICA 専門家にかかる費用 研修受講者の招待に関わる経費（航空券、交通費、日当、宿泊費、健康保険、消耗品費） 機材の供与 本邦研修受け入れ
対象国における JICA 在外事務所	<ul style="list-style-type: none"> 必要に応じて対象国における調整を支援 	

2. プロジェクトの達成度

プロジェクトの開始後に PDM の指標と達成の度合いを確認するための手段が設定された。この章においてはプロジェクト目標と成果について 3 年間のプロジェクト活動における達成の度合いを記す。達成の度合いは、(A) 達成、(B) 高い、(C) 中程度、(D) 低い、(E) 未達成あるいは確認できず、の 5 段階で評価した。プロジェクト目標とアプトプットの指標は、2013 年 11 月 8 日の第 5 回 JCC で承認された PDM の第 2 版を使用した。

2.1 プロジェクト目標

対象国教員の IAT に関する技術教育・職業訓練能力が向上する。

2.1.1 国別研修：カザフスタン

表 2.1 プロジェクト目標の指標 A-1

指標 A-1: 技術教育・職業訓練にかかわる管理職が IAT 導入の手順と方法を理解している。	
達成度: (A) 達成	
2012 年 11 月に実施されたエグゼクティブ研修と技術教育・職業訓練 (TVET) 管理職研修に、カザフスタンより合計 9 人の参加者があった。特に管理職研修では、IAT 導入の手順と方法を紹介する目的で実施し、研修の最後には参加者は所属校に IAT を導入するためのアクションプランを作成し、カザフスタン教育科学省に提出した。	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第1年次業務進捗報告書の別添：第1年次コース報告書 ・ 第2年次業務進捗報告書の別添：インパクト調査進捗報告書

表 2.2 プロジェクト目標の指標 A-2

指標 A-2: 最低 4 校の技術教育・職業訓練校が IAT 導入のためのパイロット校として選定される。	
達成度: (A) 達成	
カザフスタン教育科学省は、国立アルマティ・ポリテクカレッジ、アルマティ国立電気電子カレッジ、タルディクルガン産業カレッジ、ジャンブル・ポリテクカレッジの 4 校をパイロット校として選定した。	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第1年次業務進捗報告書の別添：第1年次コース報告書 ・ 第2年次業務進捗報告書の別添：第2年次コース報告書

表 2.3 プロジェクト目標の指標 A-3

指標 A-3: それぞれのパイロット校から最低 3 人の参加者がチームとして、IAT 基礎・中級コースの研修を指導できるようになる。	
達成度: (A) 達成	
2013 年 6 月、パイロット 4 校からそれぞれ 3 人の参加者が IAT 基礎コースを受講し、設定された学習目標を達成した。2014 年 6 月には同じパイロット校から IAT 中級コースに参加し、研修設定された研修目標が達成された。インパクト調査の結果によれば、彼らは所属するカレッジにおいて一部の理論的科目の指導を開始した。	
指標の入手手段 ・ コース報告書	成果品/エビデンス ・ 第2年次業務進捗報告書の別添：第2年次コース報告書 ・ インパクト調査報告書 ・ 事業完了報告書

表 2.4 プロジェクト目標の指標 A-4

指標 A-4: (パイロット校にて) TTC での研修を基に IAT 基礎プログラムが開発される。	
達成度: (A) 達成	
<p>2013 年 6 月にイズミールの TTC で受けた IAT 基礎研修をもとに、カザフスタンの参加者らにより、IAT 基礎プログラムをパイロット校で実施するためのアクションプランが作成された。2014 年 6 月の研修においては、さらに IAT 中級研修を導入するためのアクションプランが作成された。その結果、研修を受けた 4 校の参加者らは、それぞれのカレッジで研修プログラムを開発して所轄の教育事務所にコース開設を申請し、現在は引き続き機材購入の予算申請を行っている。それぞれのカレッジの経過は以下のとおり。</p> <ul style="list-style-type: none"> ・アルマティ国立電気・電子カレッジは、「機械プロセッシング・制御と計測機器」(1013000) という名称でコース開設が承認され、2014 年 9 月に IAT コースがスタートした。現在 27 人の生徒がこのコースを受講している。 ・タルディクルガン産業カレッジは、上記と同様のコースが 2013 年 9 月より承認され、現在 1 年生に 25 人、2 年生に 25 人、合計 50 人がコースを受講している。 ・ジャンブル・ポリテクカレッジも、同様の承認がなされた。2014 年 9 月よりコースが開設され、現在 50 人の生徒が受講している。 ・国立アルマティ・ポリテクカレッジは、コース開設申請の後、現在州教育部からの承認を待っている。 	
指標の入手手段	成果品/エビデンス
・ コース報告書	・ 第2年次業務進捗報告書の別添：第2年次コース報告書

2.1.2 国別研修：パキスタン

表 2.5 プロジェクト目標の指標 B-1

指標 B-1: 技術教育・職業訓練にかかわる管理職が、学校への IAT 導入の手順と方法を理解している。	
達成度: (A) 達成	
<p>2012 年 5 月に実施したニーズ調査では、本研修の参加協力依頼と提案を取りまとめた報告書をパキスタンの専門・技術教育省に提出し、カマール・ザマン大臣から合意を取り付けた。2012 年 11 月に実施したエグゼクティブ研修は、IAT への理解や IAT 導入の手順・方法の紹介を目的としており、パキスタンから高官 2 人が参加した。このエグゼクティブ研修の目的は、IAT の概要を理解できるように講義し、そして既存の職業訓練プログラムに IAT カリキュラムを導入するために必要な要素やプロセスについて知識を提供することである。参加した高官は、後続のトレーナー研修のため適切な研修員を選定し、3 年間継続的に TTC の研修に派遣するようサポートを行った。</p>	
指標の入手手段	成果品/エビデンス
・ 業務進捗報告書	<ul style="list-style-type: none"> ・ 第1年次業務進捗報告書の別添：ニーズ調査報告書 ・ 第1年次業務進捗報告書の別添：第1年次コース報告書

表 2.6 プロジェクト目標の指標 B-2

指標 B-2: TTC での研修のため、3 つ以上の教育機関が選ばれる。	
達成度: (A) 達成	
<p>以下の技術教育・職業訓練機関から参加者がおり、2012 年に基礎、2013 年に中級、2014 年に上級研修が実施された。</p> <ul style="list-style-type: none"> ・ National Training Bureau (NTB), Islamabad ・ Technical Training Center, Quetta, Baluchistan ・ Govt. Vocational Training Institute, Mirpur, Azad Kashmir ・ Govt. College of Technology (GCT), Rawalakot, Azad Kashmir ・ Govt. College of Technology (GCT), Peshawar, Peshawar ・ Sindh Technical Education and Vocational Training Authority (STEVTA), Sindh ・ Govt. College of Technology (GCT), Tangi Charsadda, North West Frontier Province 	
指標の入手手段	成果品/エビデンス
・ コース報告書	・ 第1年次業務進捗報告書の別添：第1年次コース報告書

表 2.7 プロジェクト目標の指標 B-3

指標 B-3: 10 人の参加者が、TTC の基礎・中級・上級コースにて研修を受ける。	
達成度: (A) 達成	
パキスタン政府はニーズ調査時の取り決めの際に、3 年間同じ施設から同じ研修員をトルコに派遣して研修に参加させることに同意した。この取り決めに従って、パキスタン人の参加者 10 人が 2012 年 12 月 3 日～21 日基礎コース、2013 年 11 月 4 日～22 日中級コース、2014 年 12 月 8 日～26 日に上級コースに参加した。結果として参加者全員が 3 つのレベルの IAT コースを受講した。	
指標の入手手段	成果品/エビデンス
<ul style="list-style-type: none"> コース報告書 	<ul style="list-style-type: none"> 第1年次業務進捗報告書の別添：第1年次コース報告書 第2年次業務進捗報告書の別添：第2年次コース報告書

2.1.3 国別研修：アゼルバイジャン

表 2.8 プロジェクト目標の指標 C-1

指標 C-1: 技術教育・職業訓練にかかわる管理職が、学校への IAT 導入の手順と方法を理解している。	
達成度: (A) 達成	
2012 年 11 月に実施されたエグゼクティブ研修と TVET 管理職研修に、アゼルバイジャンより 8 人の管理職が参加した。管理職研修では、IAT 導入の手順と方法を紹介する目的で実施し、研修の最後には、所属校に IAT を導入するためのアクションプランを作成した。アクションプランは、カザフスタン同様、アゼルバイジャン教育省に提出された。その後の進展について情報はない。	
指標の入手手段	成果品/エビデンス
<ul style="list-style-type: none"> 業務進捗報告書 	<ul style="list-style-type: none"> 第1年次業務進捗報告書の別添：第1年次報告書 第2年次業務進捗報告書の別添：インパクト調査進捗報告書

表 2.9 プロジェクト目標の指標 C-2

指標 C-2: 最低 1 校の IAT 導入のためのパイロット校が選定される。	
達成度: (E) 未達成 2013 年 11 月の第 5 回 JCC において対策が設定された	
2012 年 6 月に実施されたニーズ調査では、アゼルバイジャン教育省 TVET 総局長はパイロット校を 1 校選定し、カリキュラムや機材を試験的に導入したいと表明したが、2013 年 9 月の研修に応募してきた参加者は、パイロット校ではなく各地の職業訓練高校からであった。2013 年の参加者からの情報により IAT 機材購入の予算が確保できないため、IAT 導入の可能性が低いことが明らかになった。そのため第 5 回 JCC で議論した結果、2013 年と同じ参加者に対して 2014 年に中級コースを提供するよりも、新たな参加者らに基礎コースを提供するほうがよいという結論に至り、変更が承認された。	
指標の入手手段	成果品/エビデンス
<ul style="list-style-type: none"> 業務進捗報告書 	<ul style="list-style-type: none"> 第1年次業務進捗報告書の別添：ニーズ調査報告書 第5回JCC議事録

表 2.10 プロジェクト目標の指標 C-3

指標 C-3: 20 人の参加者が TTC にて IAT 基礎コースを受講する。	
達成度: (C) 中程度	
2013 年 9 月に 9 人が IAT 基礎コースに参加した。2014 年 10 月にはさらに 6 人参加し、研修の参加者は合計 15 人となった。当初はカザフスタン同様、10 人の参加者が基礎コースと中級コースを受講することになっていたが、第 5 回 JCC で議論されて指標が変更された。原因の一つはアゼルバイジャン教育省が IAT 機材導入にコミットしなかったことがあげられる。パイロット校が選定されていない状況では、2014 年の研修に前年度の参加者以外が多数応募してくる可能性があることから、アゼルバイジャンに対する 2014 年のコースは 2013 年と同様に IAT 基礎コースを実施し、新たな教育施設から受け入れることとなった。この変更については、2014 年の GI 送付時に TIKA からアゼルバイ	

ジャン教育省に対して説明され、変更された内容で募集手続きが進められた。しかし最終的に 2014 年のコースでは適切な応募者がそろわなかった。その要因としては、アゼルバイジャンの職業訓練校において IAT が導入できるようなコースがないこと、そして同国教育省がニーズ調査時に合意したパイロット校を設置しなかったことなどがあげられる。

指標の入手手段 ・ コース報告書	成果品/エビデンス ・ 第2年次業務進捗報告書の別添：第2年次コース報告書 ・ 第5回JCC議事録
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2.1.4 合同研修：

A ロシア語コース：キルギス、タジキスタン、トルクメニスタン、ウズベキスタン

B 英語コース：アフガニスタン、パレスチナ

表 2.11 プロジェクト目標の指標 D-1

指標 D-1: 技術教育・職業訓練にかかわる管理職が、IAT 導入の重要性を認識している。	
達成度: (C) 中程度	
2012 年 11 月に実施された国別研修の TVET 管理職研修に、キルギスから 2 人、タジキスタンから 2 人、トルクメニスタンは参加者なし、アフガニスタンから 2 人、パレスチナから 2 人で、4 カ国合計 8 人が参加した。その研修に続く TVET トレーナー研修（言語別研修でロシア語・英語）には、計画では 24 人が参加する予定だったが、実際には合計 18 人が参加した。研修に参加した国は、アフガニスタンを含まない合計 5 カ国（キルギス、タジキスタン、トルクメニスタン、ウズベキスタン、パレスチナ）。管理職研修への参加度や、TVET トレーナー研修への適切な人材の配置から判断すると、対象国 6 カ国の間に程度の差はあるが、それぞれの国で IAT の重要性は感じている。アフガニスタンについては、他国に比べ、適切な研修員受け入れのため、募集広報により力を入れる必要がある。	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第2年次業務進捗報告書の別添：第2年次コース報告書 ・ 第2年次業務進捗報告書の別添：インパクト調査進捗報告書

表 2.12 プロジェクト目標の指標 D-2

指標 D-2: 対象国各国 10 人が TTC の IAT 基礎コースにて研修を受ける。		
達成度: (C) 中程度		
プロジェクト終了時点における各国の受け入れ実績を以下に示す。		
国名	計画	実績
キルギス	10	12
タジキスタン	10	11
トルクメニスタン	10	6
ウズベキスタン	10	2
アフガニスタン	10	-
パレスチナ	10	12
合計	60	43
ウズベキスタンは当初国別研修の対象国だったが、ニーズ調査時に当時のトルコとの関係から国別研修から外され、2013 年より合同研修に含めて受け入れを開始した。IAT は対象国において新しい教科であるため、適切な研修候補者を見つけるのが難しかった。そのため選定過程においてアフガニスタン、ウズベキスタンなどから十分な数の応募が得られず、トルクメニスタンは必要な条件を満たす応募が少なかった。		
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第2年次業務進捗報告書の別添：第2年次コース報告書	

2.2 成果

2.2.1 成果1：ターゲットグループの研修が適切に計画される。

表 2.13 成果1の指標1

指標 1-1: 国別研修の対象国別に、適切な研修目標が設定される。	
達成度: (B)高い	
2012年5月から6月にかけて国別研修対象国であるカザフスタン、パキスタン、アゼルバイジャンにおいてニーズ調査が行われた。ニーズ調査では、対象国の技術教育・職業訓練の状況を調査し、トルコのTTCで行う3年間の国際研修の目標について先方政府と協議した。その結果、パキスタンでは先方政府と合意文書を締結することができ、またカザフスタンやアゼルバイジャンでは、ニーズ調査報告書を関係機関に提出した。当初予定されていたウズベキスタンでのニーズ調査はキャンセルされ、2012年11月に開催された第3回JCCにおいて、ウズベキスタンは国別研修ではなく、合同研修として取り扱うこととなった。2013年11月の第5回JCCにおいて、2年次のアゼルバイジャンに対する国別研修の対象者が見直された。アゼルバイジャン教育省がパイロット校の設置を行わなかったことなどから、初年度の参加者に対して翌年IAT中級を実施するのではなく、新たな参加者にIAT基礎コースを提供することになった。	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第1年次業務進捗報告書の別添：ニーズ調査報告書 ・ 第2年次業務進捗報告書の別添：国別研修・合同研修の研修戦略 ・ 第5回JCC議事録

表 2.14 成果1の指標2

指標 1-2: 合同研修の適切な研修目標が設定される。	
達成度: (A)達成	
合同研修では、2012年11月に第1回の研修として、TVET管理職研修を実施し、各対象国でTVETに携わる管理職を招待し、合同研修の戦略や研修コンテンツのために意見交換を行った。本研修を通して、TVETトレーナー研修の目標が設定された。	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第1年次業務進捗報告書の本文：成果の達成度 ・ 第2年次業務進捗報告書の別添：国別研修・合同研修の研修戦略

表 2.15 成果1の指標3

指標 1-3: 国別研修の適切な研修計画が作成される。	
達成度: (A)達成	
2012年6月に実施されたニーズ調査によって、アゼルバイジャン、カザフスタン、パキスタンに対する国別研修プログラムの研修計画が作成され、相手側政府関係者の合意を取り付けた。	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第1年次業務進捗報告書の別添：ニーズ調査報告書

表 2.16 成果1の指標4

指標 1-4: 合同研修の適切な研修計画が作成される。	
達成度: (A)達成	
1年次に設定された合同研修の研修目標に基づき、対象6カ国に対する研修計画とIAT基礎カリキュラムが作成された。	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第2年次業務進捗報告書の別添：国別研修・合同研修の研修戦略 ・ 第2年次業務進捗報告書の別添：第3国研修コース・スケジュール

2.2.2 成果2：ターゲットグループに対して効果的に研修が実施される。

表 2.17 成果2の指標1

指標 2-1: 70%の国別研修・合同研修の参加者が、研修内容、研修運営、宿泊サービスについて満足している。	
達成度: (A)達成	
プロジェクト終了までにエグゼクティブ研修を除き、合同研修と国別研修合わせて 14 のコースが実施された。研修参加者の満足度の平均値は以下のとおりである。 <ul style="list-style-type: none"> ・ コース内容についての満足度：98% ・ コース運営についての満足度：98% ・ 宿泊サービスについての満足度：91% 	
指標の入手手段 <ul style="list-style-type: none"> ・ 業務進捗報告書 	成果品/エビデンス <ul style="list-style-type: none"> ・ 第2年次業務進捗報告書の別添：第3国研修評価結果の概要 ・ 第2年次業務進捗報告書の別添：TTC宿泊設備に関する報告書

表 2.18 成果2の指標2

指標 2-2: 80%以上の国別研修参加者が、70%の学習成績を達成する。	
達成度: (B) 高い（評価適用 4 コースのうち、3 コースが目標値を達成）	
プロジェクト終了までに7コースの国別研修（技術研修）が実施された。2013年11月の第5回JCCにおいて承認されたプロジェクト指標2-2が作成・承認された。これに基づき研修評価方法が見直され、上記7コースのうち4コースにおいて改定された学習パフォーマンス評価（Ver.3）が適用された。 <ul style="list-style-type: none"> ・ 2012 パキスタン IAT 基礎コース：試験的評価適用（指標設定前実施分）。 ・ 2013 カザフスタン IAT 基礎コース：試験的評価適用（指標設定前実施分）。 ・ 2013 アゼルバイジャン IAT 基礎コース：試験的評価適用（指標設定前実施分）。 ・ 2013 パキスタン IAT 中級コース：10人の参加者全員が合格最低基準の習得度70%を達成。 ・ 2014 カザフスタン IAT 中級コース：12人の参加者全員が習得度70%を達成。 ・ 2014 アゼルバイジャン IAT 基礎コース：6人の参加者の半数が習得度70%を達成。 ・ 2014 パキスタン IAT 上級コース：9人の参加者全員が習得度70%を達成。 2014 アゼルバイジャン IAT 基礎コースの参加者が半数しか習得度70%を達成できなかった理由は、6人のうちの3人のバックグラウンドが算数・計算とコンピュータであり、IAT 基礎コース受講に必要な前提条件を満たしていなかったことが主な要因である。	
指標の入手手段 <ul style="list-style-type: none"> ・ 業務進捗報告書 	成果品/エビデンス <ul style="list-style-type: none"> ・ 第2年次業務進捗報告書の別添：第2年次コース報告書 ・ 第2年次業務進捗報告書の別添：第3国研修評価結果の概要

表 2.19 成果2の指標3

指標 2-3: 80%以上の合同研修参加者が70%の学習成績を達成する。	
達成度: (A)達成	
プロジェクト期間中に5コースの合同研修（技術研修）が実施された。2013年11月の第5回JCCにおいて承認されたプロジェクト指標2-2が作成・承認されたため、これに基づき研修評価方法が見直され、上記5コースのうち4コースにおいて改定された学習パフォーマンス評価（Ver.3）が適用された。 <ul style="list-style-type: none"> ・ IAT 基礎合同研修 2013A：試験的評価適用（指標設定前実施分）。 ・ IAT 基礎合同研修 2013B：7人の参加者全員が目標値の習得度70%を達成。 ・ IAT 基礎合同研修 2014A：10人の参加者全員が目標値の習得度70%を達成。 ・ IAT 基礎合同研修 2014B：5人の参加者全員が目標値の習得度70%を達成。 ・ IAT 基礎合同研修 2015A：10人の参加者全員が目標値の習得度70%を達成。 	
指標の入手手段 <ul style="list-style-type: none"> ・ 業務進捗報告書 	成果品/エビデンス <ul style="list-style-type: none"> ・ 第2年次業務進捗報告書の別添：第2年次コース報告書

	・ 第2年次業務進捗報告書の別添：第3国研修評価結果の概要
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2.2.3 成果3：フォローアップシステムが構築される。

表 2.20 成果3の指標1

指標 3-1: ウェブベースの情報システムが構築され、インストールされ、研修コースにおいて導入される。	
達成度: (A)達成	
プロジェクト開始後に研修参加者の帰国後の円滑なフォローアップを目的としてウェブベース研修支援システム（WBTS）が開発され、研修コースに導入された。開発した WBTS を効果的に活用していくことを目的に、システム開発担当者である CP と日本人専門家が協力し、2013年7月3日に各研修のコースリーダー ¹ に対し、「WBTS を活用したコースリーダーの業務手法」について指導を行い、各コースリーダーの WBTS を活用した業務とそのタイムスケジュールを明確にした。最初のドラフトを含め WBTS は研修期間中に実施された研修プログラム合同研修 6 コース、国別研修 9 コースのうち、国別エグゼクティブ研修と合同研修管理職研修を除く合計 13 コースの全ての研修コースにおいて紹介・導入され、レベルごとに到達状況が確認された（詳細は別添 12 の Level of achievement of WBTS2013-2015 参照）。	
指標の入手手段	成果品/エビデンス
・ 業務進捗報告書	<ul style="list-style-type: none"> ・ 第2年次業務進捗報告書の別添：WBTSにおける運用レベル達成度 ・ 第2年次業務進捗報告書の別添：コースリーダーの業務と担当一覧 ・ 事業完了報告書 別添12：Level of achievement of WBTS2013-2015

表 2.21 成果3の指標2

指標 3-2: 国別研修対象国について、2年次と3年次に研修効果が適切に評価され、改善点が提案される。	
達成度: (C)中程度	
2015年2月までにフォローアップ期間が完了 ² する評価対象の7つの国別研修、全コースを対象としてモニタリング調査が実施された。送付された質問票全体の回収率は38%（対象総数68人のうち40人から返信あり）であった。以下がその結果 ³ の要約である。	
<ul style="list-style-type: none"> ・ 2012 アゼルバイジャン管理職コース：対象者7人からの質問票の回収率は57%。個人で作成したアクションプラン10項目のうち、全てが開始されており、20%は終了している。例として、参加者1人は40人に対して、計180時間のセミナーを実施したと答えている。 ・ 2012 カザフスタン管理職コース：回収率0%。（対象者8からの回答なし。） ・ 2012 パキスタン IAT 基礎コース：回収率100%（10人全員が回答）。それぞれが企画した活動合計45項目のうち、98%が開始され、64%は完了した。参加者7人は帰国後それぞれの組織においてセミナーを実施し、合計460人が参加した。 ・ 2013 カザフスタン IAT 基礎コース：回収率25%（カレッジ単位で4校中1校、3人が回答）。TTCにおける研修時に参加者が所属する4つのパイロット校はそれぞれ一つのアクションプランを作成した。この調査において回答のあった1校ではアクションプラン4つの内、75%が開始され、50%は終了したことが報告された。具体的には計80人の参加者に対しトルコでの研修報告会を実施、20人の参加者に対しIATセミナーを実施した。 ・ 2013 アゼルバイジャン IAT 基礎コース：回収率22%（9人中2人が回答）。企画されたアクションプランの活動は100%実施・完了した。 ・ 2014 パキスタン IAT 中級コース：回収率50%（10人中5人が回答）。アクションプランで企画された合計20項目の活動のうち80%が開始され、30%は完了した。具体的には5人の参加者が上司に対してトルコでの研修の報告を行い、そのうち3人は同僚に対して学んだ技術の共有を行っ 	

¹ コースリーダーとは各研修コースを担当する CP スタッフを指す。

² トルコでの研修終了の3カ月後に帰国した参加者に質問票が送付され、6カ月までの間に回収される。

³ トルコでの研修において各参加者は、帰国後自分の所属する組織で実施する3つから5つの活動をアクションプランとして企画した。モニタリング調査においては、これらの活動の達成状況を確認した。

<p>た。また同じく 3 人は所属する組織において PLC 機材導入の申請を行い、承認を受けた。1 人は TEVTA（州の職業教育監督機関）に対して啓発セミナーの準備を始めた。</p> <ul style="list-style-type: none"> 2014 カザフスタン IAT 中級コース：回収率 50%（カレッジ単位で 4 校中 2 校、6 人が回答）。インパクト調査の結果では回答した 2 校とも活動を開始したとある。プロジェクト終了時に日本人専門家がカザフスタン教育省に対して聞き取りをした結果、パイロット校 4 校が IAT のプログラムを作成し教育省に対して IAT コース設置の申請を行い、そのうち 1 校は 2013 年 9 月からコースを開始し、2 校は 2014 年 9 月から IAT コースを開始した。残り 1 校は 2015 年 9 月の開設に向けて申請手続き中である。 カザフスタンのフォローアップに関しては、ロシア語-英語の翻訳の問題も発生した。 2014 年 10 月以降に実施されたアゼルバイジャンおよびパキスタンの IAT コースについては、引き続き調査を行いその結果をモニタリングする。モニタリング調査の結果、特に回収率の問題などについては業務進捗報告書のモニタリング調査報告書の中で詳しく述べている。 	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第2年次業務進捗報告書の別添：インパクト調査進捗報告書

表 2.22 成果 3 の指標 3

指標 3-3: 合同研修対象国について、2 年次と 3 年次に研修効果が適切に評価され、改善点が提案される。	
達成度: (C)中程度	
<p>プロジェクト終了前の 2015 年 2 月にフォローアップ期間が完了する以下の 3 つの合同研修に対して調査が行われた。インパクト調査の質問票の回収率は、38%であった。</p> <ul style="list-style-type: none"> 合同研修 2013A（キルギス、タジキスタン、トルクメニスタン、ウズベキスタン）：回収率 55%（11 人中 6 人が回答）。個別で作成したアクションプランの活動項目 18 件の内、94%が開始されており、72%は終了している。参加者 6 人は合計 427 人に対しセミナーを実施した。 合同研修 2013B（パレスチナ）：回収率 29%（7 人中 2 人が回答）。アクションプランで設定された 7 つの活動の全て（100%）が開始され、86%は完了した。参加者の 1 人は IAT 部門を開設して機材などを購入するための申請を行い、空圧と制御装置（PLC）の授業を実施した。 合同研修 2014A（キルギス、タジキスタン、トルクメニスタン、ウズベキスタン）：回収率 20%（10 人中 2 人が回答）。計画された 4 つの活動項目の全て（100%）を開始し、50%が完了した。参加者の 1 人は自動制御部門の職員に対して短期研修を実施し、教科開設に向けて教材の開発を開始した。別の参加者は所属する高校の校長に対して啓発を行い、ワークショップとその教材の準備を開始した。 <p>国別研修コースに比べて合同研修の対象国に対するフォローアップは困難であった。主な理由は、ロシア語-英語の翻訳の問題、インターネットのアクセス、参加者の意欲の低さなどである。他の合同研修コースについては、引き続きその時期に達した時点で調査を行う予定である。モニタリング調査の詳細、回収率の問題や達成度に関する分析についてはインパクト調査進捗報告書を参照。</p>	
指標の入手手段 ・ 業務進捗報告書	成果品/エビデンス ・ 第2年次業務進捗報告書の別添：インパクト調査進捗報告書

3. プロジェクトにおける活動

この章では、本プロジェクト 3 年間の活動について報告する。PDM においては、主に研修計画策定、研修実施、フォローアップに関連した活動、マネジメントの 4 つの活動が示されている。活動計画 (PO) には、これらの活動を時系列で示した。

3.1 成果 1: ターゲットグループの研修が適切に計画される

3.1.1 国別研修対象国に適切な研修目標の設定

2011 年 11 月に JICA が実施した本件の詳細計画策定調査⁴をもとに、プロジェクトチームは、国別研修 (CFT) と合同研修 (GT) の計画案を作成した。原案は、パキスタン、カザフスタン、アゼルバイジャン、ウズベキスタンに対して 3 年間で IAT 基礎から上級までを同じ参加者に対して行う予定であった。合同研修対象国 (トルクメニスタン、タジキスタン、キルギス、アフガニスタン、パレスチナ) に対しては、1 回あたり各国から 2 人ずつ参加者を募り、工業分野にかかわる基礎的な教科を年間 2 回、3 年間にわたり提供することを予定していた (図 3.1 参照)。

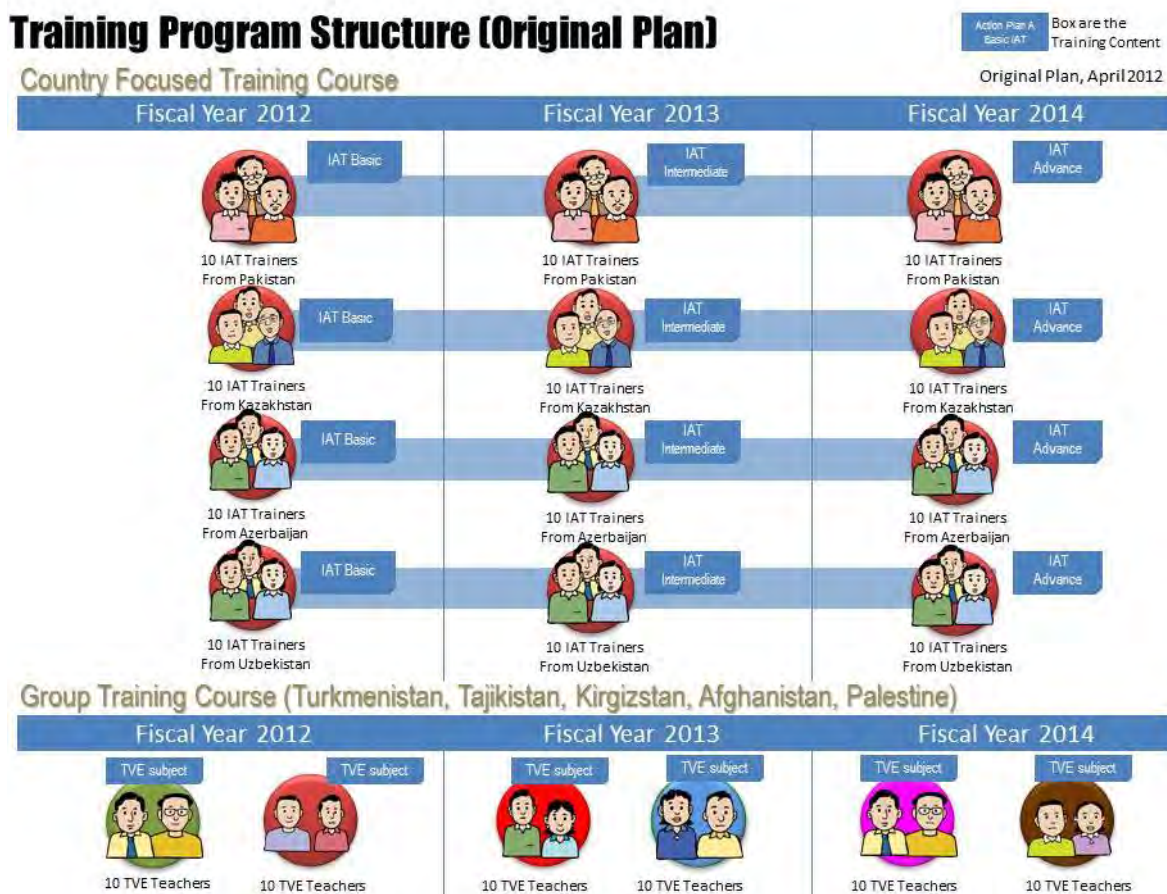


図 3.1 研修プログラム構成 (修正前)

⁴ 「トルコ国 中央アジア・中東向け自動制御技術普及プロジェクト詳細計画策定調査」報告書 (2012 年 11 月)。プロジェクト開始時はドラフト版を用いて計画策定を行った。

3.1.2 国別研修対象国へのニーズ調査団派遣

トルコ国民教育省（MoNE）、トルコ国際協力調整庁（TIKA）との連携により、本プロジェクトから国別研修ターゲット国に調査団を派遣した。当初は、4カ国を訪れる予定であったが、ウズベキスタンが中止となり最終的に3カ国となった（第1年次業務進捗報告書（英文）別添2参照）。以下、訪問国・訪問予定国と日程を記載する。

- パキスタン:2012年5月6日~13日
- ウズベキスタン:2012年5月14日~18日（中止）
- カザフスタン:2012年5月20日~26日
- アゼルバイジャン:2012年6月3日~9日

ウズベキスタンへの調査団派遣は、先方政府との調整が難航したため、やむを得ず中止となった。一方、調査団は、パキスタン、カザフスタン、アゼルバイジャンにおいて、関連機関を訪問した。調査時の評価に関しては、教育マネジメントシステム、教育に関するナショナル・スタンダード、IAT教育に関する現状、IAT教育に関するカリキュラム、職業技術高校教員のレベル、学校が所有する機材の状況、という6つの基準を用いた。

3.1.3 ターゲット国の現状とニーズの分析

国別研修対象国に対するニーズ調査（2012年5月~6月）と第1回合同研修の実施後、研修の使用言語や各国の職業技術教育に関する問題が浮上したため、研修コース構成の修正が行われた（図3.2参照）。修正版の計画においては、以下の事項が変更となった。

- (1) ウズベキスタンは、国別研修対象国から合同研修対象国へと変更された。これは、当該国におけるニーズ調査が実施できず、明確なニーズが特定できなかったこと、研修参加候補者が3年間を通して研修にコミットする確約が取れなかったことに起因する。
- (2) 新IATカリキュラム導入を斡旋するため、カザフスタン、アゼルバイジャン、パキスタンに対するエグゼクティブ研修コースが準備された。
- (3) アゼルバイジャンとカザフスタン向けに職業教育管理職コースが組まれた。これは、IATカリキュラム導入に向けた運営環境整備の準備のためである（パキスタンの場合は、IATカリキュラムがすでに導入されているために行われなかった）。
- (4) 合同研修対象国の職業技術教育管理職に対する研修プログラムが1年目に組まれた。これは、対象国のIATセクターにかかわるニーズの特定ためである。
- (5) 1年目に実施された合同研修の経験から、その後の合同研修は、英語・ロシア語の2言語に分けた。

Training Program Structure (Modified Plan)

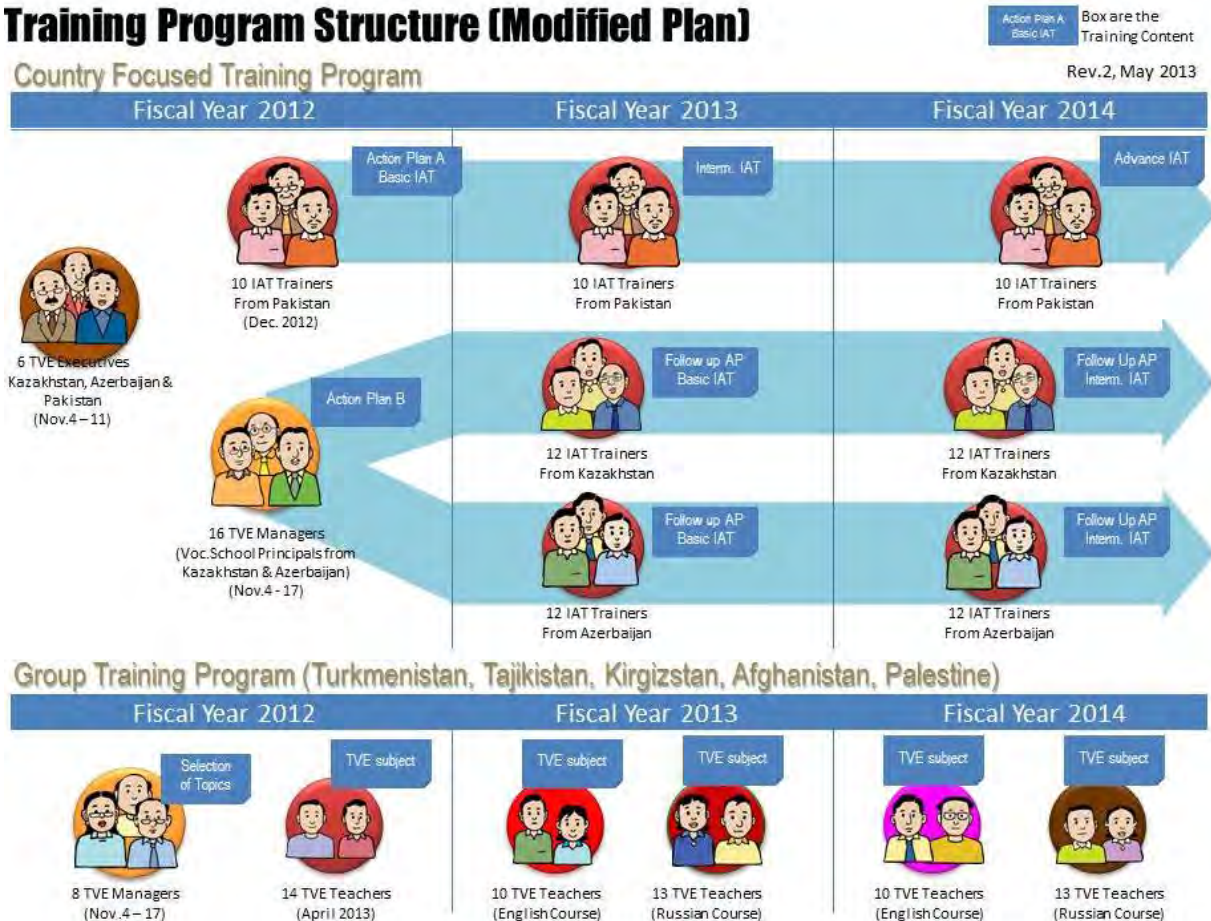


図 3.2 研修プログラム構成(修正後)

3.1.4 各国のプロジェクト対象機関の選定

ニーズ調査により、ウズベキスタンを除く国別研修対象国のプロジェクト対象機関の選定が行われ、研修参加者の募集を行った。その際、特に考慮した点として、技術教育と職業訓練に関する実施構成、当該国の政策と今後の見通しが挙げられる（表 3.1 参照）。

ニーズ調査時においては、当該国の政府関係者と研修コースの実施構成について話し合いの場を持ち、調査の終わりに報告書を提出した。パキスタンについては、研修受け入れに関し、政府機関と合意に達した（第 1 年次業務進捗報告書（英文））。

表 3.1 国別研修の研修対象機関

国名	対象機関
パキスタン	NISTE（中央政府機関でカリキュラムの承認などを行う）、NIE（中央政府所轄の電気系の技術教育機関）、NTB（中央政府所轄で産業技術教育のカリキュラムや訓練を実施している）、TEVTA（地方政府で各州にあり、職業教育全体を所轄している）の計 4 機関。
カザフスタン	職業訓練近代化プロジェクト対象校（世銀プロジェクト）、KASIPKOR 対象校（職業教育近代化モデル校プロジェクト）の計 2 校。
アゼルバイジャン	教育省職業訓練局により組織されるタスクフォースチームで、カリキュラム専門家、教育方法、産業技術専門家により構成。

3.1.5 各国におけるターゲットの特定

上記で示したニーズ調査の結果により、各国の研修目標が設定された。また、合同研修に参加する 6

カ国においては、共通目標が設定された。ウズベキスタンに関しては、ニーズ調査が行われなかった経緯から、合同研修に組み込まれることが、2012年11月22日にMoNEで行われた第3回JCCで承認された。

表 3.2 研修実施概要

項目	国別研修			合同研修
対象国	パキスタン	カザフスタン	アゼルバイジャン	アフガニスタン、キルギス、パレスチナ、タジキスタン、トルクメニスタン、ウズベキスタン
背景・ニーズ	<ul style="list-style-type: none"> 中央・地方行政所轄の職業教育機関は異なるカリキュラムを有する。 IAT 訓練は産業分野のニーズに合致する。 	<ul style="list-style-type: none"> 2020 国家開発計画に基づき教育省は職業教育の近代化を進めている。 職業訓練の向上のため IAT に関わるカリキュラム、機材、技術訓練が必要。 	<ul style="list-style-type: none"> 現在の職業教育は基礎産業技術にとどまる。IAT は大学教育でのみ触れられている。 2007～2012 年開発計画に基づき職業訓練カリキュラムの改善を進めている。 	<ul style="list-style-type: none"> 既存の職業訓練は産業基礎技術（電気、電子、機械、IT 等）だけにとどまる。
達成目標	職業訓練トレーナーは IAT システムの操作、設計、統合を指導することができる。	職業訓練トレーナーは IAT システムの操作、設計を指導することができる。	職業訓練トレーナーは IAT システムの操作、設計を指導することができる。	職業訓練トレーナーは IAT システムの基本操作を指導することができる。
訓練戦略	4 コース：①エグゼクティブ研修（1 週間）、② TVE 教員向け IAT 基礎（4 週間）、③ IAT 中級（3 週間）、④ IAT 上級（3 週間）	4 コース：①エグゼクティブ研修（1 週間）、② TVE 管理職研修（2 週間）、③ TVE 教員向け IAT 基礎（4 週間）、④ IAT 中級（3 週間）	4 コース：①エグゼクティブ研修（1 週間）、② TVE 管理職研修（2 週間）、③ TVE 教員向け IAT 基礎（4 週間）、④ IAT 中級（3 週間）	2 コース：① TVE 管理職研修（2 週間）、② TVE 教員向け IAT 基礎（4 週間） なお②の言語は国によってロシア語か英語のどちらかに参加する。
参加者	① エグゼクティブ研修：2 人 ② TVE 教員：10 人が 3 回参加	① エグゼクティブ研修：1 人 ② TVE 管理職：8 人 ③ TVE 居教員：12 人が 2 回参加	① エグゼクティブ研修：1 人 ② TVE 管理職：8 人 ③ TVE 教員：12 人が 2 回参加	① TVE 管理職：各国 2 人 ② TVE 教員：各国から 3 年間で合計 10 人参加
参加者の選定	第 1 回コース時に対象機関と参加者が選定され、次年度は同じ組織から同じトレーナーを招待する。			毎年選定する。

3.1.6 研修カリキュラムの作成・改善

これらに基づいて国別研修と合同研修のカリキュラムが作成された。この際に考慮された点としては、各国の技術レベルと目標が挙げられる（第 1 年次業務進捗報告書参照）。カザフスタン、アゼルバイジャンの国別研修と合同研修の 1 コースで使用される言語がロシア語のため、カリキュラム作成時に通訳を介する時間が考慮された。

国別研修に関しては、エグゼクティブマネージャー、TVET 管理職、TVET 教員の 3 対象グループが設定された。また、合同研修に関しては、TVET 管理職、TVET 教員の 2 対象グループが設定された。それぞれのコースの特徴については、表 3.3 に示した。

表 3.3 コース別概要一覧表

カテゴリー	エグゼクティブ	TVET 管理職	TVET 教員
目的	1. 意識向上 (IAT の重要性に対する認識) 2. コミット度向上 3. IAT カリキュラム導入に関する知識の習得	1. 意識向上 (IAT の重要性に対する認識) 2. コミット度向上 3. IAT カリキュラム導入に関する知識の習得	1. 意識向上 (IAT の重要性に対する認識) 2. コミット度向上 3. IAT 知識とスキルの習得 4. 効果的な IAT 教授法の習得
研修科目	1. IAT の重要性 2. IAT 学科の導入方法 3. モデル校の支援方法	1. IAT 序論 2. IAT 学科の導入方法 3. アクションプラン作成ワークショップ	1. IAT 序論 2. IAT 技術科目 3. 効果的な IAT 教授法
現地視察	1. 産業について <ul style="list-style-type: none"> IAT の利点 工場における必要人材 2. IAT 人材育成について <ul style="list-style-type: none"> 訓練方法：設備とカリキュラム IAT 学科の導入方法 	1. 産業について <ul style="list-style-type: none"> IAT の利点 工場における必要人材 2. IAT 人材育成について <ul style="list-style-type: none"> 訓練方法：設備とカリキュラム IAT 学科の導入方法 	1. 産業について <ul style="list-style-type: none"> IAT の利点 工場における必要人材 IAT ピラミッドの応用方法 2. IAT 人材育成について <ul style="list-style-type: none"> 訓練方法 グッド・プラクティス：OMRON, SMC 等

表 3.4 に各国対象の研修コースを示す。パキスタンにおいては、エグゼクティブ・コース、IAT 基礎、IAT 中級、IAT 上級。アゼルバイジャンとカザフスタンに関しては、エグゼクティブ・コース、IAT 基礎、IAT 中級。合同研修に関しては、TVET 管理職コースと IAT 基礎が含まれる。

表 3.4 研修コースチェックリスト

研修プログラム	パキスタン	カザフスタン アゼルバイジャン	合同研修
TVE エグゼクティブ・コース (意識向上とサポート体制)	✓	✓	
TVE 管理職のためのアクションプランモデル作成		✓	
TVE 管理職のための IAT 序論			✓
IAT 基礎	✓	✓	✓
IAT 中級	✓	✓*	
IAT 上級	✓		

(注) *印はカザフスタンのみ。

技術コースに関するカリキュラム案は、IAT プロジェクト第 2 フェーズ (2007~2010 年) 時に作成された教材をもとに作成された。第 2 フェーズの教材は、6 カ月間の研修を想定して作成されている。本プロジェクトのカリキュラムに合致させるため、内容と効率性を考慮して教材に修正が加えられた。また、2013 年と 2014 年に、本邦より IAT とインストラクショナル・デザイン (ID) の専門家を招き、TTC トレーナーの能力強化に努めるとともに、カリキュラムと研修教材の改善を行った。さらに、新たな IAT 教育機材が導入され、研修の効率性の改善に努めた (別添 3 参照)。4 回のワークショップののち、研修コースは表 3.5 に示したようになった。

表 3.5 IAT 技術研修モジュールと研修時間

	モジュール		基礎	中級	上級	合計
	GM01	GM02				
一般モジュール	GM01	開講式、オリエンテーション、閉講式等	8	8	8	24
	GM02	アクション・プラン作成とフォローアップ	2	4	4	10
	GM03	視察 (工場見学等)	18	8	8	34
一般モジュール合計時間			28	20	20	68

カテゴリー	科目		基礎	中級	上級	合計
1. 基礎知識	BE01	モーター	16	16		32
	BE02	ニューマティック	16			16
	BE03	メカニズム	8	8		16
2. コントロールと計測	CM01	センサー技術	4			4
	CM02	プロセス・コントロール			20	20
3. PLC コントロール	PL01	PLC コントロール	40	20		60
	PL02	PLC コミュニケーション		8	16	24
4. IAT	AT01	IAT システムの操作	24			24
	AT02	IAT システムのデザインと組み立て	24	40	20	84
	AT03	産業ロボット			12	12
	AT04	IAT システムの統合 (FMS)		8	32	40
技術研修の合計時間			132	100	100	332

各コースの合計時間は、表 3.6 に示すとおり。

表 3.6 各コースの合計時間

コース	基礎	中級	上級
合計時間	160	120	120
合計日数	20	15	15

3.1.7 研修教材の作成・改訂

修正された研修カリキュラムをもとに、TTC トレーナーが中心となり教材の開発を行った（別添 5 参照）。2013 年 11 月 4 日にアンカラで開催された第 5 回 JCC において、TTC トレーナーから研修教材をトルコ語、英語、ロシア語で作成し印刷・製本することが提案され、承認された。教材は、教科書、トレーナー用ガイド、IAT 紹介ビデオで構成されているが、基礎版のみ作成された。印刷・製本された



教材は、TTC で保管され、今後の研修に使用する。なお、研修参加者には、PDF 版が配布された。中級版と上級版は、パキスタンとカザフスタンのみ受講したため、コース時に配布資料として提供された。

図 3.3 開発されたテキストおよびトレーナー用ガイド

3.1.8 ID ワークショップの実施

日本の ID の第一人者である熊本大学の鈴木克明教授が、JICA により本プロジェクトに派遣され、2012 年 10 月と 2014 年 6 月にトルコを訪れた。第 1 回派遣時には、表 3.7 で示されたとおり、ワークショップやセミナーを 3 回開催した。10 月 17 日に行われた ID ワークショップにおいては、マズハルズルル工業高校や地元大学の教員ら 50 人程参加した。10 月 18 日・19 日に開催された第 3 国研修 (TCTP) ワークショップでは、カリキュラムと教材の改善・改訂が行われた。また、2014 年 6 月の第 2 回派遣時、ID ワークショップにおいては、IAT 中級・上級に関するカリキュラム作成など、カリキュラムと教材に関する更なる改善・改訂が行われた。

表 3.7 プロジェクトにおけるカリキュラム・教材改善関連イベント

日	イベント	目的	場所	講師/参加者
2012/10/16	TCTP 管理・マネジメントワークショップ	TCTP 管理・マネジメント準備のレビューと改善について	TTC カフェテリア	ムハメル・サルガン氏（トルコ国バシユケント大学講師）、アレブ・ブルブル氏（トルコ国鉱物資源総局）、イブラヒム・トロス氏（トルコ国保健省）、鈴木教授（熊本大学）、MZHS 校長、副校長、TTC トレーナー、TIKA、MoNE、JICA ら約 20 人
2012/10/17	インストラクショナル・デザイン・セミナー	職業技術に対するインストラクショナル・デザインの概要についての講義	TTC カフェテリア	講師: 鈴木教授 ファシリテーター: サルガン氏、トロス氏、伊藤専門家、仲里専門家 参加者: TTC トレーナー、MZHS 教員、地元大学教員等約 50 人
2012/10/18-19	TCTP 教材レビュー集中ワークショップ	TCTP 教材のレビューと改訂	ケラスホテル、チェシユメ	鈴木教授、TTC カウンターパートプロジェクト専門家・アシスタント、サルガン氏、トロス氏含む 13 人
2014/6/11-20	IAT 研修中級・上級カリキュラム作成指導	IAT 研修中級・上級コースカリキュラムのコンテンツの改善に関わる技術指導	TTC	講師: 熊谷英樹専門家 ファシリテーター: 伊藤専門家 参加者: CP チーム
2014/6/24-27	インストラクショナル・デザイン (ID) ワークショップ	IAT 基礎研修コースカリキュラムの枠組みと評価システムの改善指導	マルマリス	講師: 鈴木教授 ファシリテーター: 伊藤専門家、仲里専門家、藤島専門家 参加者: CP チーム
2014/6/29-7/5	IAT カリキュラム見直し作業 (CP による個別作業)	ID ワークショップの結果を踏まえて IAT 基礎研修コースカリキュラムの改定作業を行う	TTC	ファシリテーター: 鈴木教授、伊藤専門家、仲里専門家、藤島専門家 参加者: CP チーム

3.1.9 研修スケジュールの作成

初年度の研修プログラムは、第 2 回 JCC で承認された。また、初年度の研修評価の結果を踏まえ、今後の研修スケジュールに対する修正案が第 4 回 JCC で提案され、第 5 回 JCC で承認された。（別添 6 参照）

3.1.10 コース要覧の作成と各国への配布

作成されたカリキュラムと研修スケジュールをもとに GI が作成され、TIKA 現地事務所を通して各国に配布された。

3.1.11 研修マネジメント/IAT 機材指導の専門家派遣と研修内容の CP 支援

IAT 基礎コースについての TTC トレーナー支援のため、研修マネジメント/IAT 機材指導の短期専門家である熊谷英樹氏（新興技術研究所）が派遣された。熊谷氏は IAT 機材の調達業務も担っていた。JICA と MoNE の支援より、IAT 機材の調達も 2013 年 5 月に滞りなく行われ、同年 11 月 4 日に JICA より MoNE へ譲渡された（別添 3 参照）。短期専門家は、この機材を使用して研修モジュールの開発支援を行った。その結果として、2013 年 6 月のカザフスタン国別研修 IAT 基礎コースより、この機材を

使用したコースが開始された。

3.1.12 教育省幹部の本邦研修

トルコ国民教育省の総局幹部クラスを対象とした本邦研修（IAT人材育成視察本邦研修）が企画され、2013年11月17日～23日の期間で実施された。視察の目的を以下に示す。

- 1) 本邦における IAT のトレンドに関する視察と情報収集
- 2) 本邦の高等専門学校や大学機関における IAT 教育の現状視察
- 3) 本邦における国際研修センターの設備等の視察

本邦研修の参加者は、表 3.8 のとおり。

表 3.8 本邦研修の参加者リスト

氏名	役職	プロジェクトにおける役割
オメール・アチュクギョズ氏	国民教育省職業技術教育総局総局長	プロジェクト責任者
オスマン・ユルドゥルム氏	同総局カリキュラム・教材部長	後に局長に昇格してプロジェクト責任者
ユジェール・ユクセル氏	同総局部長	プロジェクト副責任者

視察と講義を通して上記の目的は達成された。

3.2 成果 2: ターゲットグループに対して研修が効果的に実施される

3.2.1 参加者の選定

プロジェクト開始時に策定された合同研修・国別研修に対する戦略に基づき、TIKA、JICA、MoNE、TTC の連携により、参加者の選定が行われた。2015年1月30日までに9回の国別研修と6回の合同研修が実施された。コースの選定過程とコース内容の概要を以下に記載する。

3.2.1.1 国別研修参加者の選定

本プロジェクトでは、合計9回の国別研修を実施した（表 3.9 参照）。選定過程においては、想定外の問題も発生した。例えば、アゼルバイジャンの TVET 管理職研修の参加者選定においては、参加者のほとんどが IAT とは関連の薄い部署の管理職であった。また、アゼルバイジャン側の人選に関わるコミットメントの低さから、2013年9月16日～10月11日に実施された国別研修 IAT 基礎コースにおいて、前提条件を満たす参加者が選定されなかった。このため、アゼルバイジャン向け最終研修を IAT 中級から基礎に変更し、新たな参加者で研修を実施することが、第5回 JCC で提案・承認されて実施に至った（別添 11 参照）。

表 3.9 国別研修参加者人数

番号	コースタイトル	国名	期間	参加校数	受入枠人数	参加者人数	備考
1	エグゼクティブ・コース	アゼルバイジャン	2012年11月5日~9日 (1週間)	-	2	1	候補者は2人であったが、参加者1人のみであった。
		カザフスタン		-	2	1	候補者は2人であったが、参加者1人のみであった。
		パキスタン		-	3	2	4人の応募があったが、2人を参加者として選定した。
2	管理職研修	アゼルバイジャン	2012年11月5日~16日 (2週間)	7	10	7	参加者の多数は、IATとは関係の薄い部署の管理職であった。
		カザフスタン		8	10	8	参加者の多数は、IATと関係の深い適切な部署の管理職であった。
3	IAT基礎PK	パキスタン	2012年12月3日~21日 (3週間)	7	10	10	20人の応募があったが、7校から10人の参加者を選定した。
4	IAT基礎KZ	カザフスタン	2013年6月3日~28日 (4週間)	4	12	12	4校から3人ずつの参加者を選定した。
5	IAT基礎AZ	アゼルバイジャン	2013年9月16日~10月11日 (4週間)	6	12	9	9人の参加者のうち5人が2011年に実施された同様のコースの参加者であった。
6	IAT中級PK	パキスタン	2013年11月4日~22日 (3週間)	7	10	10	すべての参加者が、IAT基礎コースの参加者であった。
7	IAT中級KZ	カザフスタン	2014年6月2日~20日 (3週間)	4	12	12	2人の参加者が中級コースに参加できなかったが、新たな2人をナザルバエフ大学から受け入れた。
8	IAT基礎AZ	アゼルバイジャン	2014年10月13日~11月7日 (4週間)	6	10	6	候補者のうち、4人が年齢、経験等の基準に達していなかったため、参加できなかった。
9	IAT上級PK	パキスタン	2014年12月8日~26日 (3週間)	7	10	9	全員が基礎、中級コースを受講した参加者だった。

3.2.1.2 合同研修参加者の選定

管理職研修を含む6コースが実施された(表3.10参照)。トルクメニスタンにおける参加者選定の難しさが第4回JCCで問題視されたが、TIKA現地事務所の努力により問題は解決した。ウズベキスタンに関しては、初回の合同研修に2人の参加者を派遣したが、その後の2回に関しては、参加者の派遣が実現しなかった。アフガニスタンは、2014年1月に実施された合同研修(英語コース)に5人の応募があったが、いずれの人材も選定基準に達していなかったため、同国からの参加者はいなかった。他方、パレスチナからの同コースへの候補者7人が基準に達していたため、全員受け入れた。さらに、2014年11月に行われた同コースには、アフガニスタンからの応募はなかった。

表 3.10 合同研修参加者人数

番号	コースタイトル	期間	国名	受入 枠 人数	参加者 人数	参加者 合計人数
1	管理職研修	2012年11月5日~16日 (2週間)	アフガニスタン	2	2	8 (応募: 8)
			キルギス	2	2	
			パレスチナ	2	2	
			タジキスタン	2	2	
			トルクメニスタン	2	0	
2	IAT基礎 (ロシア語)	2013年4月15日~5月10日 (4週間)	キルギス	3	2	11 (応募:14)
			タジキスタン	4	3	
			トルクメニスタン	4	4	
			ウズベキスタン	3	2	
3	IAT基礎 (英語)	2014年1月6日~31日 (4週間)	アフガニスタン	5	-	7 (応募:10)
			パレスチナ	5	7	
4	IAT基礎 (ロシア語)	2014年4月14日~5月9日 (4週間)	キルギス	4	5	10 (応募:)
			タジキスタン	3	3	
			トルクメニスタン	3	2	
			ウズベキスタン	3	-	
5	IAT基礎 (英語)	2014年11月10日~12月5日 (4週間)	アフガニスタン	5	-	5 (応募:5)
			パレスチナ	5	5	
6	IAT基礎 (ロシア語)	2015年1月5日~30日 (4週間)	キルギス	3	5	10 (応募:13)
			タジキスタン	3	5	
			トルクメニスタン	3	-	
			ウズベキスタン	4	-	

注：1番の管理職研修以外では、各国3年間で計10人ずつを枠組みとして設定している。

3.2.2 ロジスティックのアレンジ

TIKA、JICA、MoNEの緊密な連携により、プロジェクトに必要な準備が行われ、全てのコースが滞りなく実施された。トルコ側は効果的なプロジェクト運営に関する投資を行った。トルコ側のTIKAとMoNEの合算は、3年間で1,126,915トルコ・リラ（約5630万円）をコース運営にかかる資金として支出した。一方、JICAは、同様の資金（専門家の活動経費を除く）として、1,273,810.1トルコ・リラ（約6370万円）を支出した。

3.2.3 研修の実施

全ての研修はスケジュールに沿って滞りなく実施された（別添6参照）。各コースの評価、カリキュラム、教材等も適切に準備され、必要に応じて修正された。TTCにおけるCPは技術的専門性と努力を遺憾なく発揮し、研修の準備、実施、フォローアップを行った。

MZHSは、2013年8月26日に、イズミール市内の観光専門学校と正式にTTCの施設マネジメントに関する提携契約を結んだ。これにより、第3国研修に必要な宿泊施設などの準備が適切に行われた。施設改修後、全ての参加者はTTCに宿泊して研修を受講した。

3.2.3.1 国別研修国エグゼクティブ研修の実施

研修戦略に基づき、TIKA の現地事務所の調整によりカザフスタン、パキスタン、アゼルバイジャンのエグゼクティブ研修で参加者が対象機関から選定され、2012年11月5日～9日に研修が実施された。（表 3.11 参照）。

表 3.11 エグゼクティブ研修の参加者人数

コースタイトル	期間	国名	受入枠人数	参加者人数
エグゼクティブ研修	2012年11月5日～9日（1週間）	アゼルバイジャン	2	1
		カザフスタン	2	1
		パキスタン	3	2

3.2.3.2 国別研修管理職研修

カザフスタン、アゼルバイジャンの管理職研修で参加者が選定され、2012年11月5日～16日に研修が実施された（表 3.12 参照）。

表 3.12 管理職研修の参加者人数

コースタイトル	期間	国名	受入枠人数	参加者人数
管理職研修	2012年11月5日～16日（2週間）	アゼルバイジャン	10	7
		カザフスタン	10	8

3.2.3.3 カザフスタンの国別研修

研修戦略にもとづき、カザフスタンの参加者に対する国別研修が 2 回実施された。IAT 基礎は 2013 年 6 月 3 日～28 日に実施され、IAT 中級は 2014 年 6 月 2 日～20 日に実施された。いずれのコースも参加者は 12 人であった。

研修コースは TTC で実施され、IAT 基礎では基礎技術の研修が行われた。マニサとイスタンブールにおいて工場や研修施設の視察も実施された。これらの視察は、産業における IAT と IAT 教育のスタンダードを知るうえで重要である。IAT 中級では研修の他にブルサのトファシュ（TOFAS）工場視察が組み込まれた。この視察により、産業における IAT の重要性への理解が深まった。それぞれのコースにおいて、参加者からの発表、ワークショップ、情報交換等が行われた。

全体的に、参加者は研修が成功だったと評価しており、トルコを訪れて参加者間や研修教員との知識・意見の交換などが今後の役に立つと感じている（第 2 年次業務進捗報告書参照）。

3.2.3.4 アゼルバイジャンの国別研修

研修戦略にもとづき、アゼルバイジャンの参加者に対する国別研修が 2 回実施された。いずれの研修も IAT 基礎であり、2013 年 9 月 16 日～10 月 11 日と 2014 年 10 月 13 日～11 月 7 日の日程で実施された。1 回目の参加者は 9 人、2 回目は 6 人だった。

研修コースは TTC で実施され、2 回の IAT 基礎に合計 15 人が参加し、基礎技術の研修が行われた。マニサとイスタンブールにおいて工場や研修施設の視察も実施された。これらの視察は、産業におけ

る IAT と IAT 教育のスタンダードを知るうえで重要である。それぞれのコースにおいて、参加者からの発表、ワークショップ、情報交換などが行われた（第 2 回研修が、IAT 中級から IAT 基礎に変更になった理由は、本報告書 3.2.1.1 を参照）。

全体的に、参加者は研修が成功だったと評価しており、トルコを訪れて参加者間やトレーナーとの知識・意見の交換などが今後の役に立つと感じている（第 2 年次業務進捗報告書参照）。

3.2.3.5 パキスタンの国別研修

研修戦略にもとづき、パキスタンの参加者に対する国別研修が 3 回実施された。IAT 基礎は 2012 年 12 月 3 日～21 日、IAT 中級は 2013 年 11 月 4 日～22 日、IAT 上級は 2014 年 12 月 8 日～26 日の日程で実施された。IAT 基礎と中級については 10 人、上級については 9 人が参加した。パキスタンは、基礎から上級までの全てのコースを修了した唯一の参加国となった。

全てのコースは、TTC で実施され、IAT 基礎では基礎技術の研修が行われた。マニサとイスタンブールにおいて工場や研修施設の視察も実施された。これらの視察は、産業における IAT と IAT 教育のスタンダードを知るうえで重要である。IAT 中級では基礎研修で習得した技術と知識を用い、より高度な研修が実施された。IAT 上級では研修の他にブルサにおいてトファシュ(TOFAS)の工場視察が組み込まれた。この視察により、産業における IAT の重要性への理解が深まった。それぞれのコースにおいて、参加者からの発表、ワークショップ、情報交換などが行われた。

全体的に、参加者は研修が成功だったと評価しており、トルコを訪れて参加者間やトレーナーとの知識・意見の交換などが今後の役に立つと感じている（第 2 年次業務進捗報告書参照）。

3.2.3.6 合同研修対象国の管理職研修

研修戦略に基づき合同研修対象国の管理職研修が実施された。研修は、2012 年 11 月 5 日～16 日に実施され、参加者は、アフガニスタン 2 人、キルギス 2 人、パレスチナ 2 人、タジキスタン 2 人の計 8 人であった。

表 3.13 合同研修対象国の管理職参加者数

コースタイトル	期間	国名	受入枠人数	参加者人数
管理職研修	2012 年 11 月 5~16 日 (2 週間)	アフガニスタン	2	2
		キルギス	2	2
		パレスチナ	2	2
		タジキスタン	2	2
		トルクメニスタン	2	0

管理職研修は TTC で実施され、IAT における基礎技術の研修が行われた。イズミール、マニサとイスタンブールにおいて工場や研修施設の視察も実施された。これらの視察は、産業における IAT と IAT 教育のスタンダードを知るうえで重要である。研修中に、インターセクトリアルミーティングが開催された。このミーティングの目的は、本プロジェクトにおける研修参加国のニーズを参加国の視点から探ることであり、その結果を今後の研修に活かすための話し合いの場を設けることであった。

全体的に、参加者は研修が成功だったと評価しており、トルコを訪れて参加者間やトレーナーとの知識・意見の交換などが今後の役に立つと感じている（第 1 年次業務進捗報告書参照）。

3.2.3.7 アフガニスタン、パレスチナの合同研修（英語コース）

前に述べたように、アフガニスタンの候補者は、本研修の参加条件を満たすことができず、パレスチナの参加者にのみ研修が実施された。IAT 基礎が、2014年1月6日～31日と同年11月10日～12月5日の2回行われ、第1回は7人、第2回は5人が参加した。

それぞれのコースは、TTC で実施され、IAT における基礎技術の研修が行われた。マニサとイスタンブールにおいて工場や研修施設の視察も実施された。これらの視察は、産業における IAT と IAT 教育のスタンダードを知るうえで重要である。第2回研修に参加した参加者のレベルが高かったため、カリキュラムを一部変更して IAT 中級の内容が組み込まれた。それぞれのコースにおいて、参加者からの発表、ワークショップ、情報交換などが行われた。

全体的に、参加者は研修が成功だったと評価しており、トルコを訪れて参加者間やトレーナーとの知識・意見の交換などが今後の役に立つと感じている。

3.2.3.8 キルギス、タジキスタン、トルクメニスタン、ウズベキスタンの合同研修（ロシア語コース）

研修計画に基づいてキルギス、タジキスタン、トルクメニスタン、ウズベキスタンに対する合同研修（ロシア語コース）が3回実施された。上述のように、ウズベキスタンは、第1回 IAT 基礎に2人の参加者を派遣したが、その後の2回に関しては参加者の派遣がかなわなかった。第1回は2013年4月15日～5月10日、第2回は2014年4月14日～5月9日、第3回は2015年1月5日～30日の日程で実施された。第1回はキルギスより2人、タジキスタンより3人、トルクメニスタンより4人、ウズベキスタンより2人の計11人の参加があった。第2回はキルギスより5人、タジキスタンより3人、トルクメニスタンより2人の計10人だった。第3回はキルギスより5人、タジキスタンより5人の計10人で研修を行った。

全てのコースは TTC で実施され、IAT における基礎技術の研修が行われた。第1回研修では、イズミールとイスタンブールにおいて工場や研修施設の視察が実施され、第2回では、イズミール、マニサ、イスタンブール、第3回研修では、マニサとイスタンブールで実施された。これらの視察は、産業における IAT と IAT 教育のスタンダードを知るうえで重要である。それぞれのコースにおいて、参加者からの発表、ワークショップ、情報交換などが行われた。

全体的に、参加者は研修が成功だったと評価しており、トルコを訪れて参加者間やトレーナーとの知識・意見の交換などが今後の役に立つと感じている。

3.2.4 合同研修対象国のニーズ分析と人材育成セミナーの実施

これらは、合同研修管理職研修（3.2.3.6）の一環として2012年行われた。研修期間中、第1回インターセクトリアル・ミーティングが、2012年11月7日～8日に行われた。このミーティングの目的は、合同研修に参加する国の実情と各国の IAT スタンダードを確認することであった。その理由として、国別研修対象国では、ニーズ調査を実施し情報を収集できたが、合同研修対象国（とウズベキスタン）は、同様の調査ができなかったためである。この会合で得た情報をもとに、ニーズ分析と人材育成セミナーが行われ、今後の研修に役立つ話し合いが行われた（第1年次業務進捗報告書（英文）参照）。

3.2.5 研修内容の評価

実施された研修内容の評価を行うため、次の4項目を用いて評価が実施された。それは(A)モジュール

ル評価、(B) 全体評価、(C) 評価会議、(D) 学習実績評価である（表 3.14 参照）。結果に関しては別添 7 を参照のこと。

表 3.14 評価ツールの説明

評価ツール	内容
(A) モジュール評価	モジュールとその要素の効果と弱点を洗い出す際に用いられる。主に講義などで科目の改善などに役立つ。
(B) 全体評価	研修の効果やコースマネジメントの効率性を見極める際に用いられる。参加者からのコース内容、コースマネジメントなどの満足度調査などにも用いられる。
(C) 評価会議	参加者から直接聞き取りを行うことである。本プロジェクトでは、JICA、MoNE、TIKA らの関係者も会議に参加した。
(D) 学習実績評価	参加者の知識や技術の習得度を測るツールである。本プロジェクトでは、参加者の達成度調査に使用した。

3.3 成果 3: フォローアップシステムが構築される

3.3.1 研修後の各国におけるフォローアップ計画の作成

参加者の帰国後の活動をサポートするため、フォローアップ計画が作成された。フォローアップは、基本的に WBSS を用いて行われる。WBSS を用いた主な活動には、以下の事項が含まれる。

- 参加者の活動モニタリング
- 追加の技術指導
- 活動実施に必要な事項に関するリクエスト対応
- 追加サポートの提供
- 機材リストの送付、特定分野に関するサポート、コース内容のデジタル版の配布等の実質的なサポートの実施

フォローアップの構成は、主に以下の事項からなる。

(1) 研修実施期間中の準備

研修実施中に参加者が WBSS の操作に慣れるよう、WBSS の目的やダウンロード、ファイルの添付などの基本操作方法、調査票への回答の仕方、Eメールの送付への仕方、カレンダーのアップデートなどの基本的な操作方法の研修を行った。

(2) 帰国後の研修実施 (OJT)

WBSS のカレンダーを用い、研修中に参加者が作成したアクションプランをフォローする。必要に応じて技術的なサポートを行う。

このフォローアップは、国別研修と合同研修の両方で行われた。WBSS に関しては、以下のターゲット⁵を想定した。

(a) 管理職

研修時に作成したアクションプランのサポート。特に、管理に関する項目に重点を置く。

⁵ 国別研修と合同研修に関しては、上級管理職（エグゼクティブ）、管理職、TVET 教員の 3 組のターゲットグループがある。ただし、上級管理職に関しては、研修の目的が IAT の重要性の認識に置かれているため、フォローアップのターゲットは管理職と教員の 2 組に絞った。

(b) TVE 教員

研修時に作成したアクションプランのサポート。特に、技術に関する項目に重点を置く。

3.3.2 WBTSS の開発

フォローアッププラン (3.3.1) にあるように、WBTSS が開発された。これは、参加者間、参加者と TTC 教員間のコミュニケーションを促進し、参加者が帰国した後もサポートを実施できるように開発された。開発に関しては、JICA 専門家と TCC の CP が行った。ただし、作業量の効率化の観点から、ウェブシステムの構築に関しては外部の業者が行った。開発されたシステムは、TTC 内のサーバーにアップロードされ、TTC のウェブサイトとともに管理されている。情報の更新なども TCC の CP によって行われており、本プロジェクトを通して使用された。

(1) 目的

- 参加者のマネジメントスキル、ツール、活動などに関するプロジェクト・マネジメント・システム全般の能力向上
- 効率的な情報共有
- 分析、フォローアップ過程、タイムスケール、予算、リソース、リスクなど、プロジェクト成功のために必要な活動を行うため
- プロジェクトのサイクル、イニシアチブ、計画、実施、終了などを提供するため
- プロジェクト期間中における参加者の活動の管理とモニタリングのため
- プロジェクトの目的達成、良好な結果と評価を導き出すため

(2) 対象

9カ国の職業訓練校の教員

パキスタン、ウズベキスタン、カザフスタン、アゼルバイジャン、アフガニスタン、パレスチナ、キルギス、トルクメニスタン、タジキスタンの約 100 人

(3) WBTSS ウェブサイトの内容

- TTC からの更新情報の掲示
- 3年間のマネジメントカレンダー
- ブログ
- ディスカッションやファイル共有などのインタラクション

(4) 開発スケジュール (2013 年)

表 3.15 WBTSS 作成スケジュール

活動	期間 (日にち)	備考
ウェブ会社の提案と見積り収集	6月12日まで	担当：プレント氏と仲里専門家
ウェブ会社の選定	6月19日まで	プロジェクトと契約締結
ウェブデザインの作成	8月31日まで	担当：プレント氏
1回目の試作版	9月30日まで	担当：プレント氏
WBTSS セミナー	10月18日まで	発表：プレント氏
WBTSS の使用開始	9月30日まで	関係者全員

(5) 想定される成果

- 1) 研修の活動と教育戦略が明確化されることにより、参加者の理解度と参加意識を向上させる土壌の構築に役立つ。
- 2) OJTにより、研修活動のスキルと知識、TTC トレーナーの研修教材作成能力が改善される。
- 3) 研修戦略の明確化により、CP のオーナーシップ意識と自立意識が醸成される。
- 4) 人材開発システムを強化することにより、組織全体（研修活動実施能力）の強化につながる。

3.3.3 ウェブシステムの効果的な操作のためのセミナー開催

表 3.16 に示す日程で、TTC トレーナーのための WBTSS セミナーが 2 回開催された。

表 3.16 WBTSS セミナーの日程

	期日	場所	テーマ
第 1 回セミナー	2012 年 9 月 18 日	カラスホテル チェシュメ	WBTSS とは
第 2 回セミナー	2012 年 9 月 20 日	TTC	WBTSS の操作

セミナー内容

- 1) WBTSS の目的
- 2) WBTSS の対象
- 3) IAT 管理職のための戦略
 - 3-1) トルコでの研修 (Off JT)、母国での研修 (OJT)
 - 3-2) トルコでの研修時における WBTSS の評価の仕方
 - 3-3) 帰国後の WBTSS の評価の仕方
- 4) IAT 教員（参加者）のための戦略
 - 4-1) トルコでの研修 (Off JT)、母国での研修 (OJT)
 - 4-2) トルコでの研修時における WBTSS 評価方法
 - 4-3) 帰国後の WBTSS の評価方法
- 5) 次回への提言
- 6) WBTSS の操作

3.3.4 計画に基づいたフォローアップの実施

本プロジェクト 1 年次の終了後、パキスタンの参加者を除き、WBTSS はあまり活発に使用されなかった。これには 3 つの理由が考えられる。第 1 に言語の問題が挙げられる。WBTSS には自動翻訳機能を付けたが、機能に限界があり参加者からの投稿があっても、TTC トレーナーが内容を適切に理解できない事態が発生した。第 2 に、参加者の職場におけるインターネット環境が十分整備されていなかったことが挙げられる。第 3 の理由は、参加者の年齢が上がるにつれ、新たな IT 環境への順応が進まなかったためである。

上記の問題から、フォローアップについては WBTSS と並行して、TIKA を通じて郵便で調査票を配布し回収する方法を取った。各研修コースは終了から 3 カ月後、担当のコースリーダー（TTC 職員）から全ての参加者に対し、調査票（アンケート）が配布された（ただし、プロジェクト終了直前に行

われたパキスタン上級研修と最終合同研修は除く)。この調査票配布の目的は、参加者の帰国後のアクションプランに基づく活動のモニタリングである。上記のフォローアップは、6カ月を目途に調査票の回収を主な活動として実施された。フォローアップの達成度を以下の表に記載した(国別研修は表3.17、合同研修は表3.18を参照)。パキスタン上級研修と最終合同研修に関しては、コースリーダーが調査票の配布を行い、継続して調査票回収などに努める(別添8参照)。

表 3.17 国別研修フォローアップ状況(調査票配布)

番号	国別研修 コースタイトル (言語、期間)	国名 参加者人数	参加者 合計人数	各国 回答数	回答人数 合計	回答率
1	管理職研修(ロシア語) 2012年11月5日-16日 (2週間)	アゼルバイジャン(7)	15	アゼルバイジャン (4)	4	27%
		カザフスタン(8)		カザフスタン(0)		
2	IAT基礎(英語) 2012年12月3日-21日 (3週間)	パキスタン(10)	10	パキスタン(10)	10	100%
3	IAT基礎(ロシア語) 2013年6月3日-28日 (4週間)	カザフスタン(12)	12	カザフスタン(3)	3	25%
4	IAT基礎(トルコ語) 2013年9月16日-10月11日 (4週間)	アゼルバイジャン(9)	9	アゼルバイジャン (2)	2	22%
5	IAT中級(英語) 2013年11月4日-22日 (3週間)	パキスタン(10)	10	パキスタン(5)	5	50%
6	IAT中級(ロシア語) 2014年6月2日-20日 (3週間)	カザフスタン(12)	12	カザフスタン(6)	6	50%
7	IAT基礎(トルコ語) 2014年10月13日-11月7日 (4週間)	アゼルバイジャン(6)	6	アゼルバイジャン (0)	調査票は配布されたが、回収時期に達していない。	
8	IAT上級(英語) 2014年12月8日-26日 (3週間)	パキスタン(9)	9	パキスタン(0)	調査票配布時期に達していない。	
	合計	68		30		45%

(注) エグゼクティブ研修では、フォローアップを実施していない。

表 3.18 合同研修フォローアップ状況(調査票配布)

番号	国別研修 コースタイトル (言語、期間)	国名 参加者人数	参加者 合計人数	各国 回答数	回答人数 合計	回答率
1	IAT基礎(ロシア語) 2013年4月15日-5月10日 (4週間)	キルギス(2)	11	キルギス(2)	6	55%
		タジキスタン(3)		タジキスタン(3)		
		トルクメニスタン(4)		トルクメニスタン(1)		
		ウズベキスタン(2)		ウズベキスタン(0)		
2	IAT基礎(英語) 2014年1月6日-31日 (4週間)	パレスチナ(7)	7	パレスチナ(2)	2	29%
		アフガニスタン(0)		アフガニスタン(0)		

3	IAT基礎（ロシア語） 2014年4月14日-5月9日 (4週間)	キルギス(5)	10	キルギス(2)	2	20%
		タジキスタン(3)		タジキスタン(0)		
		トルクメニスタン(2)		トルクメニスタン(0)		
		ウズベキスタン(0)		ウズベキスタン(0)		
4	IAT基礎（英語） 2014年11月10日-12月5日 (4週間)	パレスチナ(5)	5	パレスチナ()	調査票は配布されたが、回収時期に達していない。	
		アフガニスタン(0)		アフガニスタン()		
5	IAT基礎（ロシア語） 2015年1月5日-30日 (4週間)	キルギス(5)	10	キルギス()	調査票配布時期に達していない。	
		タジキスタン(5)		タジキスタン()		
		トルクメニスタン(0)		トルクメニスタン()		
		ウズベキスタン(0)		ウズベキスタン()		
合計		28		10		38%

(注) 管理職研修には、アクションプランの作成がカリキュラムに組み込まれていないため、フォローアップは実施されていない。

3.3.5 インパクト調査の評価

インパクト調査の対象となったコースは、国別研修6コースと合同研修3コースの合計9コースである。各国参加者に対し、調査票が研修終了から3カ月後に配布され、6カ月以内に回収された。集計結果によると、42%の参加者（96人中40人）が調査票に回答を寄せた。以下のグラフは全9コースの結果を表している。

調査票に回答した40人が、アクションプランにおいて計125項目の基準を設けた。このうち、53%の項目で活動が完了し、17%でほぼ完了した。24%は開始されたばかりで、4%に関してはまだ開始されていない。これらの集計結果から、研修は効果的であったと結論づけられる。

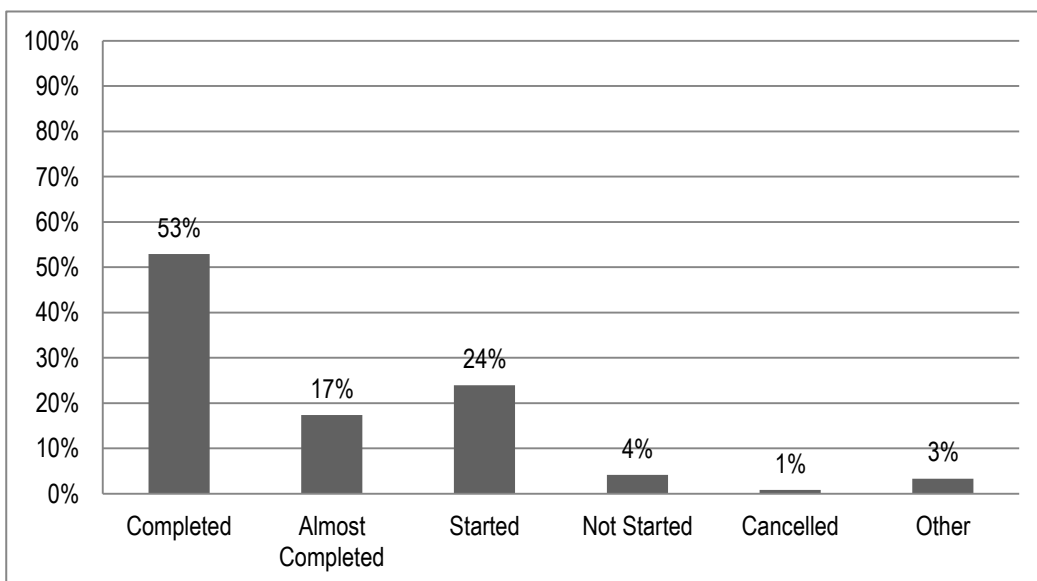


図 3.4 アクションプランの達成度 (アクションプランの全体項目数 (回答者のみ) :125)

3.4 マネジメント活動

3.4.1 合同調整委員会 (JCC) の開催

本プロジェクト期間中に JCC は合計 8 回（臨時会合を除く）が開催された。JCC の主な目的は以下のとおり。

- (1) 各年の業務計画を承認する。
- (2) 実施された活動を評価する。
- (3) プロジェクト内の課題について話し合い、解決に向けて提言する。

開催された JCC の会議内容を表 3.19 にまとめた。

表 3.19 合同調整委員会 (JCC)

JCC	場所、参加者数	主な内容
第 1 回 2012 年 4 月 12 日	シェラトンホテル、アンカラ 参加者 15 人 (レセプション招待者 42 人)	<ul style="list-style-type: none"> ● PDM (Project Design Matrix) の確認 ● 全体スケジュールの確認 ● 1 年次事業計画に関するディスカッション ● プロジェクト開会レセプション
第 2 回 2012 年 6 月 18 日	MoNE 会議室、アンカラ 参加者 16 人	<ul style="list-style-type: none"> ● ニーズ調査結果発表 ● 研修プログラムの提案 ● CP アサインメントの提案 ● 研修予算 ● PDM の修正
第 3 回 2012 年 11 月 22 日	MoNE 会議室、アンカラ 参加者 16 人	<ul style="list-style-type: none"> ● 3 コースの研修実施結果 ● 3 コースの研修実施における教訓 ● 2 年次作業計画の提案
第 4 回 2013 年 6 月 11 日	MoNE 会議室、アンカラ 参加者 17 人	<ul style="list-style-type: none"> ● 対象国との連携に係る発表 (TIKA) ● 2012 年のプロジェクト実施の結果 ● 2012 年の第 3 国研修の教訓 ● 2 年次の活動に関する提案と業務計画の承認 ● PDM 指標に関するディスカッション
第 5 回 2013 年 11 月 8 日	キングホテルギュベンリク、アンカラ 参加者 20 人	<ul style="list-style-type: none"> ● プロジェクトの課題に関わる発表とディスカッション ● プロジェクト終了後の TTC の継続性と持続性について ● PDM 指標に関わる確認と承認
第 6 回 2014 年 7 月 3 日	キングホテルギュベンリク、アンカラ 参加者 13 人	<ul style="list-style-type: none"> ● 2 年次のプロジェクト活動の結果 ● 3 年次の業務計画 ● TTC 専門家のカザフスタン派遣について ● プロジェクト終了後の TTC の継続性と持続性について
終了時評価のための臨時 2014 年 9 月 26 日	アンカラ 参加者 8 人 及び オブザーバー 1 人	<ul style="list-style-type: none"> ● 終了時評価に関するディスカッション ● プロジェクト延長に関するディスカッション
第 7 回 2014 年 12 月 23 日	チャンカヤ IMKB 観光専門学 校、アンカラ 参加者 15 人	<ul style="list-style-type: none"> ● 活動の進捗とプロジェクト終了に向けたスケジュール ● 新規案件の可能性に関する懇談 ● 新規プロジェクト案に関わる発表とディスカッション
第 8 回 2015 年 3 月 10 日	TTC、イズミール 参加者 19 人	<ul style="list-style-type: none"> ● プロジェクト 3 年間の活動に関する発表 ● 主な成果と教訓に関わる発表 ● プロジェクト終了後に TTC の活動に関わる提案 ● プロジェクトの成果の展示と IAT システムの実演 ● プロジェクト終了レセプション

3.4.2 活動実施計画の作成

日本人専門家チームは、2011 年 11 月 28 日付で取り交わされ R/D をもとに、3 年間の活動実施計画を作成した（別添 9 参照）。

3.4.3 PDMにおける客観的な指標の設定・承認

この活動は当初、第2回 JCC において計画されていたが、JCC 参加者の合意により、1年次の活動が終了する第4回 JCC で指標の設定を行うこととなった。ニーズ調査の結果をふまえ、エグゼクティブ研修が教員レベルでの研修の前に実施された。この研修において、国別研修対象国のアクションプランが作成された。以上をふまえ、最終的に PDM の指標は第5回 JCC において承認された（別添1 参照）。

3.4.4 業務計画書の作成・承認

プロジェクトチームは、各年で業務計画を作成して JCC に提示した。これらの計画は、JCC の場で話し合われ承認された。1年次については第1回 JCC、2年次については第4回 JCC、3年次については第6回 JCC で承認された（別添2 参照）。

3.4.5 研修内容における JCC 議事録のサポート

本プロジェクトでは、各年で MoNE、TIKA、JICA がコストシェアリングについての合意がなされた。プロジェクトチームは、これらに関する書類の作成、支出にかかわる情報等の提供を遅滞なく行った（別添11 参照）。

3.4.6 業務進捗報告書の作成

第1年次業務進捗報告書は、プロジェクトチームによって作成され、JCC 参加者の検査をもって、MoNE、TIKA、JICA に提出された。同様に、第2年次業務進捗報告書は、2014年4月27日に提出された。

3.4.7 プロジェクトの終了時評価の支援

本プロジェクトの終了時評価は、MoNE、TIKA、JICA の連携のもと、2014年9月15日～26日の期間で行われた。JICA により、評価コンサルタントが日本から派遣され、プロジェクトの目標達成度の評価、教訓と提言が成された。プロジェクトチームは、評価が滞りなく行われるように、必要なデータ、レポート、プロジェクトの目標達成度の根拠などを提出した。評価コンサルタントの聞き取りにも協力した。終了時評価の結果は「終了時評価報告書」としてまとめられた。

3.4.8 プロジェクト結果の TTC へのフィードバックと CP への支援

日本人専門家とトルコ側 CP との間では、プロジェクトの結果に関わる自己評価と TTC の今後について、継続的に話し合いが持たれてきた。ここで生まれた案は、第8回 JCC で共有された。

3.4.9 事業完了報告書の作成

2015年3月10日に事業完了報告書（英文）ドラフトが JICA へ提出された。JICA からのコメント等への対応が完了した後、最終的にまとめられ MoNE、TIKA、JICA へ提出される予定である。

4. 各年における成果ごとの実施タスク

4.1 1年次の活動（2012年4月～2013年4月）

1年次に行った活動の要約を以下の表に示した。活動は、作業計画表改訂5版にあるように実施された（別添2参照）。

(1) 成果1: 対象国の研修が適切に計画される

表 4.1 成果1に関するタスク（1年次）

タスク	活動の結果
タスク 1-1 研修ターゲットが適切に設定される。	<ul style="list-style-type: none"> ● 国別研修対象国（パキスタン、カザフスタン、アゼルバイジャン）に対するニーズ調査が2012年5月～6月に行われた。この調査により、各国に対する適切な研修プログラムが設定された。 ● 2012年11月に実施された合同研修対象国の管理職研修により、各国に対する適切なプログラムが設定された。
タスク 1-2 対象国のニーズと現状が分析される。	<ul style="list-style-type: none"> ● 対象国における経済状況、産業化レベル、技術教育、職業訓練システム、技術的ニーズ等の分析が行われた。既存の資料等を活用し、研修コース計画が明確化された。
タスク 1-3 国別研修対象国にニーズ調査団が派遣される。	<ul style="list-style-type: none"> ● 当初の計画では、パキスタン、カザフスタン、アゼルバイジャン、ウズベキスタンにおける IAT 職業教育のニーズを調査するものであった。ニーズの特定のため、TTC、TIKA、JICA から構成されるニーズ調査団が、2012年5月～6月の期間にパキスタン、カザフスタン、アゼルバイジャンを訪れた。ただし、ウズベキスタンに関しては、先方政府との調整が不調に終わり、訪問はかなわなかった。
タスク 1-4 各対象国のターゲット機関が選定される。	<ul style="list-style-type: none"> ● TTC、TIKA、JICA から構成されるニーズ調査団が、2012年5月～6月の期間にパキスタン、カザフスタン、アゼルバイジャンを訪れた。この調査により、各国の職業訓練状況の把握と3年間の研修ターゲット内容を想定できた。 ● 当初、このニーズ調査では、ウズベキスタン訪問も予定されていたが、ウズベキスタン政府との調整が不調に終わり、訪問はかなわなかった。
タスク 1-5 各国に対する具体的なターゲットが設定される。	<p>ニーズ調査の結果と合同研修国管理職研修から各国における以下のターゲットが特定できた。</p> <ul style="list-style-type: none"> ● パキスタン: IAT 基礎、中級、上級 ● カザフスタン: IAT 基礎、中級 ● アゼルバイジャン: IAT 基礎、中級（その後、基礎のみに変更） ● 合同研修国: IAT 基礎
タスク 1-6 研修カリキュラムが作成/改善される。	<ul style="list-style-type: none"> ● 各国のレベルと目標に合わせて、国別研修と合同研修のカリキュラムが作成され、プログラムに合わせて修正が加えられた。
タスク 1-7 研修教材が作成・改善される。	<ul style="list-style-type: none"> ● TTC トレーナーが、既存の研修教材の改善・改訂を行った。 ● 参加者の使用言語に対応するため、トルコ語の他に、英語とロシア語の教材が作成された。
タスク 1-8 ID ワークショップが実施される。	<p>TTCにおいて、第3国研修プログラムのためのレビューに関するワークショップが2012年10月16日～19日の期間に日本から外部講師を招いて行われた。このワークショップにおいては、第3国研修の技術面とマネジメント面における振り返りと改善が主なテーマであった。主なプログラムを以下に示す。</p> <ul style="list-style-type: none"> ● 第3国研修管理・マネジメントのワークショップ ● インストラクショナル・デザインのセミナー ● 第3国研修教材レビューのワークショップ
タスク 1-9 研修スケジュールが決定される。	<ul style="list-style-type: none"> ● 研修スケジュールと参加者数に関して、活動の進捗具合に基づき、第3回 JCC で合意された。

タスク 1-10 GI が作成され対象国に配布される。	<ul style="list-style-type: none"> ● カリキュラムと研修スケジュールに基づき、国別研修と合同研修対象国に関する GI が作成された。 ● 各国に GI が配布された。
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(2) 成果 2: ターゲットグループに対して効果的に研修が実施される

表 4.2 成果 2 に関するタスク (1 年次)

タスク	活動の結果
タスク 2-1 各国の参加者が選定される。	
タスク 2-1-1 国別研修の参加者が選定される。	● TIKA、JICA、MoNE と TTC の連携により、国別研修参加者が選定された。
タスク 2-1-2 合同研修の参加者が選定される。	● TIKA、JICA、MoNE と TTC の連携により、合同研修参加者が選定された。
タスク 2-2 ロジスティックスのアレンジ。	● TIKA、JICA、MoNE と TTC の連携により、研修が滞りなく準備された。
タスク 2-3 研修の実施。	
タスク 2-3-1 国別研修対象国エグゼクティブ研修が実施される (カザフスタン、パキスタン、アゼルバイジャン)。	● 国別研修対象国エグゼクティブ研修が、2012 年 11 月 5 日~10 日の期間で実施された。 参加者は、パキスタンより 2 人、カザフスタンより 1 人、アゼルバイジャンより 1 人の計 4 人であった。
タスク 2-3-2 国別研修対象国管理職研修が実施される (カザフスタン、アゼルバイジャン)。	<ul style="list-style-type: none"> ● カザフスタン、アゼルバイジャンを対象とした管理職研修が 2012 年 11 月 5 日~16 日の期間で実施された。 ● アゼルバイジャンから 7 人、カザフスタンから 8 人の計 15 人の職業訓練校校長が研修に参加し、IAT 教育導入に係るアクションプランを作成した。
タスク 2-3-5 パキスタンに対する国別研修が実施される。	● パキスタンに対する国別研修が 2012 年 12 月 3 日~21 日の期間で実施され、10 人が参加した。
タスク 2-3-6 合同研修国管理職研修が実施される。	<ul style="list-style-type: none"> ● アフガニスタン、パレスチナ、キルギス、タジキスタン、トルクメニスタンに対する合同研修国管理職研修が、2012 年 11 月 5 日~16 日の期間で実施された。 ● トルクメニスタンからの参加者はいなかったが、その他の国からは、各 2 人が参加した。
タスク 2-3-8 キルギス、タジキスタン、トルクメニスタン、ウズベキスタンに対する合同研修 (ロシア語) が実施される。	● 合同研修 (ロシア語) が 2013 年 4 月 15 日~5 月 10 日の期間で実施され、キルギスから 2 人、タジキスタンから 3 人、トルクメニスタンから 4 人、ウズベキスタン 2 人の計 11 人が参加した。
タスク 2-4 ニーズ分析と人材育成セミナーが実施される。	● 4 カ国 8 人が参加し、セミナー結果に関するディスカッションや評価が行われた。
タスク 2-5 研修内容が評価される。	● シラバス、研修計画、カリキュラム、研修教材と評価方法が改善された。

(3) 成果 3: フォローアップシステムが構築される

表 4.3 成果 3 に関するタスク (1 年次)

タスク	活動の結果
タスク 3-1 研修対象各国の参加者に対するフォローアップ計画が作成される。	● 帰国後のフォローアップ計画が作成された。
タスク 3-2-1 WBTSS が開発される。	● 参加者間、参加者と TTC トレーナー間で、帰国後の技術的なサポートなどを行うため、WBTSS が開発された。
タスク 3-2-2 WBTSS の効果的な操作に関するセミナーが開催される。	● TTC トレーナー (教員) 向けの WBTSS 操作セミナーが開催された。

(4) マネジメント活動

表 4.4 マネジメント活動に関するタスク (1 年次)

タスク	活動の結果
第 1 回 JCC の開催 (2012 年 4 月 12 日)	第 1 回 JCC の要点を以下にまとめた。 <ul style="list-style-type: none"> ● PDM と R/D で示されている実施体制と内容の確認 ● 全体スケジュールと活動の確認

	● 1年次の活動計画のドラフト
第2回 JCC の開催 (2012年6月18日)	第2回 JCC の要点を以下にまとめた。 ● TTC トレーナーのアサインメント ● 研修予算 ● PDM の修正
第3回 JCC の開催 (2012年11月22日)	第3回 JCC の要点を以下にまとめた。 ● 最初の3回の研修における教訓 ● 研修内容とその教授法についての報告 ● 福利厚生とサービス (宿泊施設、健康管理、交通手段等) についての報告
プロジェクト実施計画が策定される。	● 第1回 JCC で確認された。
業務計画書が作成され、承認される。	● 第1・2回 JCC で承認された。
研修内容に関する JCC 議事録(M/M)の支援。	● 内容が各 JCC で発表された。
業務進捗報告書が作成される。	● 2013年4月に提出された。

4.2 2年次の活動 (2013年5月～2014年4月)

2年次に行った活動の要約を以下の表に示した。活動は、作業計画表改訂5版にあるように実施された (別添2参照)。

(1) 成果1: 対象国の研修が適切に計画される

表 4.5 成果1に関するタスク (2年次)

タスク	活動の結果
タスク 1-6: 研修カリキュラムが作成/改善される。	● 2013年6月22日～23日の期間にクシャダスで開催された第3回国研修カリキュラム作成ワークショップにおいて、研修カリキュラムは TTC トレーナーと日本人専門家が作成した。
タスク 1-7: 研修教材が作成・改善される。	● カザフスタン国別研修 IAT 基礎 (2013年6月3-28日) の実施に基づき、研修教材の改善と改訂が上記のワークショップで行われた。
タスク 1-9: 研修スケジュールが決定される。	● 修正された研修スケジュールと期間は、第4・5回 JCC において提案・承認された。
タスク 1-10: GI が作成され対象国に配布される。	● 研修開始前に国別情報の GI が作成され各国に配布された。
タスク 1-11: 研修機材/マネジメント指導の専門家派遣と研修内容改善に関する CP 支援が実施される。	● IAT 専門家である熊谷英樹氏 (新興技術研究所) が本プロジェクトに派遣され、TTC トレーナーの研修カリキュラムの作成と改善を支援した。
タスク 1-12: MoNE 管理職の本邦研修が実施される。	MoNE 技術教育職業訓練総局 (GDTVET) の管理職に対する本邦研修が9日間 (2013年11月16日～24日) の日程で実施された。主なプログラムを以下に示した。 ● 日本における IAT 関連技術の動向視察 ● 大学や職業訓練学校等における IAT 教育の実態視察 ● JICA の国際研修センターの設備やサービス視察 帰国後のフィードバックによると、管理職側は本プロジェクト実施に肯定的なインパクトを受けたようである。

(2) 成果2: ターゲットグループに対して効果的に研修が実施される

表 4.6 成果2に関するタスク (2年次)

タスク	活動の結果
タスク 2-1-1 国別研修の参加者が選定される。	● TIKA、JICA、MoNE と TTC の連携により、国別研修参加者が選定された。
タスク 2-1-2 合同研修の参加者が選定される。	● TIKA、JICA、MoNE と TTC の連携により、合同研修参加者が選定された。
タスク 2-2 ロジスティックスのアレンジ	● TIKA、JICA、MoNE と TTC の連携により、研修が滞りなく準備された。
タスク 2-3-3: カザフスタンに対する国別研	● カザフスタンに対する国別研修が 2013年6月3日～28日の期間で実

修が実施される。	施され、12人が参加した。
タスク 2-3-4: アゼルバイジャンに対する国別研修が実施される。	● アゼルバイジャンに対する国別研修が 2013 年 9 月 16 日~10 月 11 日の期間で実施され、9 人が参加した。
タスク 2-3-5: パキスタンに対する国別研修が実施される。	● パキスタンに対する国別研修が 2013 年 11 月 4 日~22 日の期間で実施され、10 人が参加した。
タスク 2-3-7: パレスチナ、アフガニスタンに対する合同研修（英語コース）が実施される。	● パレスチナとアフガニスタンに対する合同研修（英語コース）が 2014 年 1 月 6 日~31 日の期間で実施された。 ▶ パレスチナから 7 人が参加した。 ▶ アフガニスタンからは、基準に達する候補者からの応募がなかったため、参加者がいなかった。
タスク 2-3-8: キルギス、タジキスタン、トルクメニスタン、ウズベキスタンに対する合同研修（ロシア語）が実施される。	● 合同研修（ロシア語コース）が 2014 年 4 月 14 日~5 月 10 日の期間で実施された。 ▶ キルギスより 5 人 ▶ トルクメニスタンより 2 人 ▶ タジキスタンより 3 人 ▶ ウズベキスタンに関しては、先方政府からの応募がなかったため、参加者がいなかった。
タスク 2-5: 研修内容が評価される。	● 研修終了時のテスト、コースのモジュール、全体に関わる評価は概ね良好であった。 ● 研修内容については、各コースのモジュール評価が科目ごとに行われた。

(3) 成果 3: フォローアップシステムが構築される

表 4.7 成果 3 に関するタスク（2 年次）

タスク	活動の結果
タスク 3-2-1: WBTSS が開発される。	● 第 1 年次に開発された WBTSS に修正・改善が加えられた。
タスク 3-3: 計画に沿ったフォローアップが実施される。	● 参加者が研修期間中にアクションプランを作成した。 ● 研修員に対し、研修終了 3 ヶ月後にインパクト調査フォームが送付された。 ● 一部の参加者から返答を回収し、必要に応じてフィードバックなどを行った。
タスク 3-4: 研修のインパクトが評価される。	● 研修効果に関しては、インパクト調査結果のモニタリングによって評価された。

(4) マネジメント活動

表 4.8 マネジメント活動に関するタスク（2 年次）

タスク	活動の結果
第 4 回 JCC の開催（2013 年 6 月 11 日）	第 4 回 JCC の要点を以下にまとめた。 ● TIKA による対象国の研修協力に関する発表 ● 2012 年のプロジェクト実施結果に関する発表 ● 2 年次の活動に関する提案 ● PDM の指標に関するディスカッション
第 5 回 JCC の開催（2013 年 11 月 8 日）	第 5 回 JCC の要点を以下にまとめた。 ● プロジェクト進捗概況の発表 ● 2014 年~15 年のスケジュールに関する修正の提案 ● 2014 年のアゼルバイジャン国別研修候補者に関わる提案 ● フォローアップの結果と研修効果の向上に関する戦略 ● プロジェクト終了後の TTC の継続性と持続性に係るディスカッション ● 国民教育省技術教育職業訓練総局による TTC の効果的な活用についての発表 ● PDM 指標の確認と承認
PDM の客観的な指標が最終化され確認される。	● 第 5 回 JCC で承認した。
業務計画書が作成され、承認される。	● 第 4 回 JCC で承認した。
研修内容に関する JCC 議事録(M/M)の支援。	● 内容に関する発表が各 JCC で行われた。
業務進捗報告書が作成される。	● 2014 年 4 月に提出した。

4.3 3年次の活動(2014年5月～2015年4月)

3年次に行った活動の要約を以下の表に示した。活動は、作業計画表改訂5版にあるように実施された(別添2参照)。

(1) 成果1: 対象国の研修が適切に計画される

表 4.9 成果1に関するタスク (3年次)

タスク	活動の結果
タスク 1-6: 研修カリキュラムが作成・改善される。	● 2014年6月に派遣された IAT 短期専門家の指導と ID 専門家の指導を受け、研修カリキュラムの改善が行われた。
タスク 1-7: 研修教材が作成・改善される。	● 上記のワークショップにおいて、研修教材の更新と改訂が行われた。
タスク 1-8: ID ワークショップが実施される。	● 2014年6月24日～27日の期間にマルマリスで、第2回 ID ワークショップが開催され、IAT 基礎研修フレームワークの見直しと評価方法の指導が行われた。
タスク 1-9: 研修スケジュールが決定される。	● 研修スケジュールが第6回 JCC で決定・最終化され、当初より若干の修正が加えられた。
タスク 1-10: GI が作成され対象国に配布される。	● GI が研修開始前に作成され各国に配布された。
タスク 1-11: 研修機材/マネジメント指導の専門家派遣と研修内容改善に関する CP 支援が実施される。	● ID 専門家の鈴木教授と IAT 専門家の熊谷氏の支援により、研修カリキュラムと教材の改善が行われた。

(2) 成果2: ターゲットグループに対して効果的に研修が実施される

表 4.10 成果2に関するタスク (3年次)

タスク	活動の結果
タスク 2-1-1 国別研修の参加者が選定される。	● TIKA、JICA、MoNE と TTC の連携により、国別研修参加者が選定された。
タスク 2-1-2: 合同研修の参加者が選定される。	● TIKA、JICA、MoNE と TTC の連携により、合同研修参加者が選定された。アフガニスタンに関しては、先方政府から本コースへの適合性に難色を示されたため、参加者の派遣がなかった。
タスク 2-2: ロジスティックスのアレンジ	● TIKA、JICA、MoNE と TTC の連携により、研修が滞りなく準備された。
タスク 2-3-3: カザフスタンに対する国別研修が実施される。	● カザフスタンに対する国別研修が 2014年6月2～20日の期間で実施され、12人が参加した。
タスク 2-3-4: アゼルバイジャンに対する国別研修が実施される。	● アゼルバイジャンに対する国別研修が 2014年10月13日～11月7日の期間で実施され、6人が参加した。
タスク 2-3-5: パキスタンに対する国別研修が実施される。	● パキスタンに対する国別研修が 2014年12月8～26日の期間で実施され、9人が参加した。
タスク 2-3-7: パレスチナ、アフガニスタンに対する国別研修(英語コース)が実施される。	● 国別研修(英語コース)が 2014年11月10日から12月5日まで実施された。 ▶ パレスチナより5人が参加したが、アフガニスタンに関しては、先方政府から本コースへの適合性に難色を示されたため、参加者の派遣がなかった。
タスク 2-3-8: キルギス、タジキスタン、トルクメニスタン、ウズベキスタンに対する合同研修(ロシア語)が実施される。	● 合同研修(ロシア語)が 2014年4月14日～5月9日と 2015年1月5日～30日まで実施された。 ▶ キルギスより合計で10人(5/5) ▶ タジキスタンより合計で8人(3/5) ▶ トルクメニスタンより合計で2人(2/0) ▶ ウズベキスタンに関しては、先方政府からの応募がなかったため、参加者がいなかった。
タスク 2-5: 研修内容の評価が実施される。	● 研修内容については、各コースのモジュール評価が科目ごとに行われた。

(3) 成果3: フォローアップシステムが構築される。

表 4.11 成果3に関するタスク (3年次)

タスク	活動の結果
タスク 3-2-1: WBTSS が開発される。	● 第2年次から更に修正が加えられた。
タスク 3-3: 計画に沿ったフォローアップが実施される。	<ul style="list-style-type: none"> ● 参加者が研修期間中にアクションプランを作成した。 ● 研修員に対し、研修終了3カ月後にインパクト調査フォームが送付された。研修員から以下の返答を回収した。 ● 一部の参加者から返答を回収し、必要に応じてフィードバックなどを行った。
タスク 3-4: 研修のインパクトが評価される。	● 研修効果の評価は、インパクト調査のモニタリングをもって行われた。

(4) マネジメント活動

表 4.12 マネジメント活動に関するタスク (3年次)

タスク	活動の結果
第6回 JCC の開催 (2014年7月3日)	<p>第6回 JCC の要点を以下にまとめた。</p> <ul style="list-style-type: none"> ● プロジェクトの進捗に関して MoNE からの発表 ● 2年次のプロジェクト活動結果に関する発表 ● TTC の効果的な活用方法に係る発表 ● 3年次の業務計画に関する発表 ● TTC 専門家 (教員) のカザフスタンへの派遣に関する説明 ● JICA によるプロジェクト評価と課題に関する発表 ● プロジェクト終了後における TTC の継続性と持続性のディスカッション
臨時 JCC の開催 (2014年9月26日)	<p>臨時 JCC の要点を以下にまとめた。</p> <ul style="list-style-type: none"> ● 終了時評価に関する報告とディスカッション
第7回 JCC の開催 (2014年12月23日)	<p>第7回 JCC の要点を以下にまとめた。</p> <ul style="list-style-type: none"> ● プロジェクトの進捗に関する報告 ● 今後の技術協力プロジェクトについての発表 ● 新規プロジェクトに向けた準備プロジェクトについての発表 ● 本プロジェクトの延長に関するディスカッション (その後プロジェクト終了が決まった)。
第8回 JCC の開催 (2015年3月10日)	<p>第8回 JCC の要点を以下にまとめた。</p> <ul style="list-style-type: none"> ● 3年間の活動に関する発表 ● プロジェクト終了宣言
業務計画書が作成され、承認される。	● 第6回 JCC にて発表・承認された。
研修内容に関する JCC 議事録の支援。	● 各 JCC にて発表された。
終了時評価の支援。	● 終了時評価の支援として、評価に必要なデータ・資料の提出やインタビューでの受け答え等を行った。
TTC に対するプロジェクト実施結果のフィードバックを行う。必要があれば、TTC カウンターパートに対する追加の支援。	● 第8回 JCC において、TTC カウンターパートが3年間の振り返りを発表し、日本人専門家チームは、プロジェクトにおける教訓・提言の発表を行った。
事業完了報告書を作成する。	● 2015年3月10日に英文ドラフトを JICA トルコ事務所担当者に送信した。4月15日までに印刷・製本を完了し、JICA トルコ事務所に郵送予定。

5. プロジェクトの成果と教訓

第2章において示したように、本プロジェクトでは多くの成果を生み出し、JCCメンバーをはじめトルコの関係者から高い評価を受けることができた。本章においてはプロジェクトの主要な成果をまとめるとともに、プロジェクトチームによる教訓を整理した。

5.1 プロジェクトの主な成果

本プロジェクトによって確認されている成果を以下に示す。

- **第3国研修参加国における高いインパクト**

3年間のプロジェクトによって9カ国から合計138人の職業訓練に関わる教員、校長や管理職が、トルコにおいて産業自動化技術（IAT）の研修に参加した。アンケートの結果、高い満足度が得られるとともに、研修評価の結果から比較的高い修得度が達成できた。研修プログラムのインパクトを裏付けることのの一つが、2012年4月に実施されたニーズ調査時において、パキスタンの教育大臣（当時は専門・技術訓練省大臣）が本プログラムに対して強い関心とコミットメントを示し、3年間の研修プログラムの同意書に署名したことである。この後、次官が初年度TTCで開催したエグゼクティブプログラムに参加した。パキスタンの政府高官が本件にコミットしたことで、10人の教員らが3年間にわたってTTCでの研修に参加し、IAT基礎から中級、上級までのコースを修了することが可能となった。この結果、参加者は所属する組織においてIATコンテンツの導入を始めている。もう一つの特記すべきインパクトの例がカザフスタンである。現地からの最新の情報によれば、国別研修に参加したパイロット4校のうち3校において新しくIATコースが開設され、現在127人の学生がこのコースを受講している。

- **質の高い研修プログラムが開発された**

産業自動化技術（IAT）やインストラクショナル・デザイン（ID）に関わる日本の第一人者が本プロジェクトにおいて短期専門家として指導を行った。これらの指導によりTTCのトレーナーの知識や技術は著しく向上した。IATに関わるカリキュラムは、3年間にわたる開発と実地検証の繰り返しにより、その技術的レベルと研修手法において国際スタンダードと言える質にまで引き上げられた。

- **トルコ語、英語、ロシア語の教材が開発された**

新しいIAT基礎コースの教材が開発され、3カ国語の教材としてまとめられた。これによりTTCは、これらの言語を用いる国からの研修受け入れがいつでも可能となった。

- **高度な専門性を備えたトレーナーが育成された**

TTCトレーナーに対する能力強化は次の5項目に基づいて計画され、指導、そしてその経過がモニタリングされた。それは、(1) IATの知識と技術、(2) 教授法スキル、(3) カリキュラム開発スキル、(4) 情報管理・活用スキル、(5) プロジェクトマネジメントスキル、である。これらのコン

ピテンシーに基づき3年間の間に実施したCPを対象としたトレーナー訓練（TOT）ワークショップや研修プログラムと教材開発・実施・評価過程でのOJT指導の結果、TTCトレーナーは質の高い研修プログラムを提供できるレベルに達した。

- **最新のIATの教育システムの導入**

3年間のプロジェクトにおいて研修プログラムの質を高めるために、JICAから最新の日本製IAT教育システム（機材）が供与された。このシステムは汎用性が高く、これを活用することにより、短期間でIATに関わる包括的な知識とスキルを効果的に学習することが可能となった。

- **産業自動化を活用している工場との連携**

3年間のプロジェクトにおいてイズミール、マニサ、ブルサ、イスタンブールの工場と提携し協力関係を築き上げ、これによって各研修コースで工場の視察研修をより効果的に実施できるようになった。特に、マニサの工場とはIATに関わる教材の共同開発の合意も取り付け、実施することができた。

- **大学や企業との連携**

2年次に実施されたトルコ西部地域の大学実態調査によって、次の大学との情報共有や協力が可能となった。デニズリ大学、ウスパルタ・スレイマン・デミレル大学、アフヨン・コジャテペ大学、キュタフヤ・デュムルンプナル大学、ブルサ技術大学、エーゲ大学、デゲイズ大学である。2014年12月にはTTCトレーナーが日本人専門家とともにイスタンブールにおいて開催された国際先端産業自動化学会・展示会に参加し、産業自動化企業協会（ENOSAD）関係者と将来の協力や情報共有を行うための新たな連携を取り付けた。

5.2 プロジェクトによって得られた教訓

3年間の活動とその結果を振り返り、プロジェクトチームにより得られた教訓を以下に整理した。今後これらの教訓が他のプロジェクトやTTCの将来の活動に役立つことが期待される。

- **国別研修プログラムについて**

本プロジェクトの国別研修は非常にユニークなプログラムと言える。まずコースを開始する前に対象国に対してニーズ調査を実施し、それぞれの国の実態に合わせたコース戦略を設定するとともに、対象国のコミットメントを取り付けた。次に同じ対象者に対して3年間継続的・段階的に訓練することはこれまでの国際研修プログラムにおいては前例が少ない。このような新しいアプローチによりTTCトレーナーは日本人専門家とともに参加者に対して段階的に知識・技術の移転を行った。参加者も翌年のコース受講の条件であることから、学んだ知識や技術を自国で共有することにコミットし、インパクトの高い成果へとつながった。参加者の組織において新しいプログラムの導入を促進した他の重要な要因が、TTCトレーナーによる参加者の帰国後のフォローアップである。国別研修においては各国のニーズが吸い上げられ、それに基づいて効果的な研修が実施され、さらに自国における普及につながった。

- **合同研修プログラムについて**

各対象国の教育やカリキュラムの状況が異なるので、参加者の選定においては共通の条件だけではなく、ある程度各国の現状を考慮する必要がある。これ以外では参加者の言語の違いが効果的な研修やフォローアップの大きな壁となった。第 1 回の合同研修において 2 人の通訳（英語・トルコ語とロシア語・トルコ語）を備上した経験からの教訓として、研修コースは対象国の地理的位置づけや国の発展のレベルに応じた分け方より、参加者の共通の言語を優先して対象国をまとめるほうが重要であることを学んだ。合同研修を言語別に分けることにより、TTC トレーナーと参加者や参加者間のコミュニケーションがより円滑に行えるようになった。

- **ウェブベース研修支援システムを用いたフォローアップについて**

理論的には WBTSS は帰国した参加者のフォローアップを行うために有効なツールである。パキスタンのケースにおいては、参加者が活発に帰国後の活動について相談のためのコメントや質問を書き込み、TTC トレーナーとのコミュニケーションが行われた。しかし他国においては、ウェブベースのシステムを活用すること自体が非常に困難なケースもあることが明らかになった。これは言語の問題、IT 環境の問題、そして対象国の教育自体の問題に起因すると考える。言語の問題に対処するために、WBTSS に自動翻訳機能を組み込むなどしたが、必ずしも精度が十分でなく参加者による書き込みをトレーナーが理解するのが難しいなどの問題が生じた。IT 環境については、多くの参加者の職場においてインターネット環境が整備されていないことが明らかになった。これまでに使ったことがない新しいコミュニケーションシステムの活用に対して、特に年配の参加者の適応力が低いことなども利用頻度が伸びない要因となった。

- **対象国における IAT のニーズについて**

アゼルバイジャンや合同研修の対象国などについては、IAT 教育の導入はまだ初歩の段階にあり、大学ならともかく工業高校への IAT 教科の導入は時期尚早と言える。参加者の国々における人材や参加者の所属する組織の設備・機材などの現状とニーズについての調査が必要であるが、トルコで学んだ知識などを活用しコース内容を導入するためには、基礎的な IAT 機材の購入が不可欠である。一方、カザフスタンやパキスタンについては、IAT 教育がトレンドとなっており需要が高いため、本プロジェクトで実施した研修は非常に強いインパクトを与えた。

MoNE と JICA による 14 年間の技術協力によって、TTC は国際基準の施設、機材、研修プログラムとトレーナーが整備された。これはトルコ・日本双方による多額の予算投入と関係者の多大な努力の賜物である。そういった意味では本プロジェクトの成果は 2 カ国間の長期的な協力と友情の結果であると言える。

プロジェクトチームとしては、今後 TTC がトルコとその周辺国における職業訓練高校の教員訓練や、大学、産業団地や地域の工場などに対して、質の高い研修プログラムを提供していくことを強く期待するものである。

別添 1-12

別添 1

Project Design Matrix (PDM) 第 2 版

別添1 Project Design Matrix (PDM) 第2版

Project Title: The Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries		Duration: February 2012 – April 2015	
Implementing Agency: Ministry of National Education (MoNE)		Collaborating Agency: Turkish Cooperation and Coordination Agency (TIKA)	
Target Site: Teacher Training Center (TTC) of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School			
Target Countries: 1) Country Focused Training: Azerbaijan, Kazakhstan, Pakistan and 2) Group Training: Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan			
Target Group: Teachers teaching IAT and related subjects in technical and vocational schools in target countries			
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Super Goal IAT human resources are developed in target countries.	IAT department is established in at least in one of the participant's institution.	Follow up survey report	
Overall Goal Technical education and vocational training capacity on IAT of target countries is enhanced.	Trial IAT program(s) is/are introduced to the participant's institution.	Follow up survey report	<ul style="list-style-type: none"> • A decision was taken by the local government for the establishment of the IAT department.
Project Purpose Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.	<p>A. Kazakhstan:</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of what and how to introduce IAT program into the TVE. 2. At least 4 TVE colleges are selected as IAT Pilot College. 3. At least 3 teachers from each pilot college become capable of teaching basic and intermediate IAT course as team. 	<p>A. Kazakhstan:</p> <ol style="list-style-type: none"> 1. Course implementation reports 2. Need survey report, project progress report 3. Course implementation reports 4. Impact survey report 	<ul style="list-style-type: none"> • Equipment are purchased by the participant institution. • IAT Curriculum(s) is/are approved by the Ministry of Education of target countries. • Teachers trained in Turkey are assigned to conduct the new curriculum at each target country.

	<p>4. Basic IAT course program(s) is/are developed based on the training at TTC.</p> <p>B. Pakistan:</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of what and how to introduce IAT program in their schools. 2. At least 3 or more institutions are selected for the participation to training in TTC. 3. 10 teachers are trained in Basic, Intermediate and Advance IAT course at TTC. <p>C. Azerbaijan:</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of what and how to introduce IAT program in their schools. 2. At least one institution is selected as IAT pilot college. 3. 20 teachers are trained in Basic IAT course at TTC. <p>D. Group Training target countries</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of the importance of the IAT. 2. At least 10 teachers from each country are trained in basic IAT course. 	<p>B. Pakistan:</p> <ol style="list-style-type: none"> 1. Course implementation report, Impact survey report 2. Course implementation report, Project progress report 3. Course implementation report <p>C. Azerbaijan:</p> <ol style="list-style-type: none"> 1. Course Implementation report, impact survey report 2. Project progress report 3. Course implementation report <p>D. Group Training target countries</p> <ol style="list-style-type: none"> 1. Course implementation report 2. Course implementation report 	
<p>Output:</p> <ol style="list-style-type: none"> 1. Training for target group is appropriately planned. 	<ol style="list-style-type: none"> 1-1 Appropriate training targets are set for each country focused training country. 1-2 Appropriate training targets are set for group training. 1-3 Appropriate training plans are prepared for country-focused training program. 1-4 Appropriate training plans are prepared for group training program. 	<ol style="list-style-type: none"> 1-1 Agreement document prepared with each country during the Need Survey 1-2 Project progress reports 1-3 Project progress reports 1-4 Project progress reports 	<ul style="list-style-type: none"> • As results of the need survey in CFT target countries, local government agreed the target institution and content recommended by the survey team. • A discussion for training content identification was implemented among the GT target countries.

<p>2. Training for target group is effectively provided.</p> <p>3. Follow-up system is established.</p>	<p>2-1 70% of the course participants are satisfied in terms of course content, course management and Accommodation services in GT courses and CFT courses.</p> <p>2-2 At least 80% of participants in country focused training achieve the 70 % of the learning performance.</p> <p>2-3 At least 80% of participants in group training achieve the 70% of the learning performance.</p> <p>3-1 Web-based information system is developed, installed and introduced during the training course.</p> <p>3-2 Training impact is properly assessed in second and third year in CFT countries, identifying the degree of utilization, its affecting factors, and recommendation(s) for improvement.</p> <p>3-3 Training impact is properly assessed in second and third year in GT countries, identifying the degree of utilization, its affecting factors, and recommendations for improvement.</p>	<p>2-1 Results of the Course Questionnaire</p> <p>2-2 Results of the Course achievement tests</p> <p>2-3 Results of the Course achievement tests</p> <p>3-1 Project progress reports</p> <p>3-2 Follow up survey report for CFT countries</p> <p>3-3 Follow up survey report for GT countries</p>	
<p>Activities</p>	<p>Inputs</p>		
<p>1-1 Identify detailed training needs of each country.</p> <p>1-2 Select target institution(s) in each country.</p> <p>1-3 Establish specific project targets for each country.</p> <p>1-4 Develop/ improve training curriculum.</p> <p>1-5 Prepare/ improve training material.</p> <p>1-6 Determine training schedule.</p> <p>2-1 Select participants.</p> <p>2-2 Arrange logistics.</p>	<p>[Turkish Side]</p> <p>1) Personnel</p> <ul style="list-style-type: none"> • Project Director (Director General, General Directorate of Technical and Vocational Education) • Deputy Project Director (Head of Department, General Directorate of Technical and Vocational Education) • Project Manager (Principal, Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School) 	<p>[Japanese Side]</p> <p>1) Experts</p> <ul style="list-style-type: none"> • Chief Advisor/ Training Management • Coordinator/ Curriculum Development • Other fields <p>2) Following training cost:</p> <ul style="list-style-type: none"> • Air fare, Transportation, 	<ul style="list-style-type: none"> • Sufficient numbers of TTC counterparts are assigned to conduct the preparation, implementation and evaluation of the courses. • Necessary equipment s and facilities are provided for the course implementation at TTC. • Sufficient PC and smooth internet connection is provided at TTC to each participant. • Necessary PC and internet connection is provided at

<p>2-3 Implement training. 2-4 Evaluate training.</p> <p>3-1 Develop follow-up plan. 3-2 Develop web-based information system. 3-3 Conduct follow-up of the CFT and GT participants through web-based information system as well as through the TIKa foreign offices. 3-4 Evaluate the impact of the training based on the collected information.</p>	<ul style="list-style-type: none"> • Project Coordinator (Teachers Training Center) • IAT Trainers (TTC) • Focal point person of TIKa <p>2) Facilities</p> <ul style="list-style-type: none"> • Office space for experts at TTC • Training facilities at TTC • ICT facilities including PC, Server, LAN and Internet. <p>3) Available data and information related to project</p> <p>4) Recurrent costs</p> <ul style="list-style-type: none"> • Supply of replacement of machinery, equipment, instruments, vehicles, tools, spare parts and other materials owned by Turkey side. • Utility and other basic expenses to run project. <p>5) Following training cost:</p> <ul style="list-style-type: none"> • Interpretation, Translation, Meeting expenses, Training material, Document printing, Excursion etc. <p>6) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Turkish side.</p>	<p>Per-diem, Accommodation, Insurance etc.</p> <p>3) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Japanese side.</p>	<p>participants institutions.</p> <hr/> <p>Pre-condition</p> <ul style="list-style-type: none"> • Target countries participate in project. • MoNE's decision to provide international training on IAT to the neighboring countries doesn't change.
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別添 2

作業計画表 第 5 版

別添2: 作業計画表 第5版

Concentrate to carry out the tasks (Solid blue bar) Carry out the tasks accordingly (Dotted blue bar)

Project Period	1st Year												2nd year												3rd year																							
	2012												2013												2014												2015											
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4											
【Output 1】 Training for the target group is appropriately planned.																																																
1-1 Set the appropriate training targets for the training.																																																
1-2 Analyze situation and needs of the target countries.																																																
1-3 Dispatch needs survey mission to the target country-focused training countries.																																																
1-4 Select target institution(s) in each target country.																																																
1-5 Establish specific project targets for each country.																																																
1-6 Develop/ improve training curriculum.																																																
1-7 Prepare/ improve training material.																																																
1-8 Conduct Instruction Design Workshop.																																																
1-9 Determine training schedule.																																																
1-10 Develop and distribute GI (General Information) to target countries.																																																
1-11 Dispatch IAT Equipment/Training Manag. expert and support CPs to improve training contents.																																																
1-12 Implement training in Japan for MoNE managers.																																																
【Output 2】 Training for the target group is effectively provided.																																																
2-1 Select participants in each country.																																																
2-1-1 Select participants for the country-focused training.																																																
2-1-2 Select participants for the group training.																																																
2-2 Arrange logistics.																																																
2-3 Implement training.																																																
2-3-1 Implement training for CF TVE Executive Managers (Kaz, Pak, Azer)																																																
2-3-2 Implement Country Focus Training for TVE Managers (Kaz, Azer)																																																
2-3-3 Implement Country Focus Training for Kazakhstan.																																																
2-3-4 Implement Country Focus Training for Azerbaijan.																																																
2-3-5 Implement Country Focus Training for Pakistan.																																																
2-3-6 Implement Training for Group Training Countries Managers																																																
2-3-7 Implement Group Training for Afghanistan and Palestine (English Course)																																																
2-3-8 Implement Group Training for Kyrg., Taj., Turk., and Uzb. (Russian Course)																																																
2-4 Conduct need analysis and human resource development seminar for group training countries.																																																
2-5 Evaluate contents of the training																																																
【Output 3】 Follow-up system is established.																																																
3-1 Develop follow-up plan for trained participants in each country.																																																
3-2-1 Develop web-based information sharing system.																																																
3-2-2 Implement the seminar for effective operation of the web system.																																																
3-3 Conduct follow-up based on the plan.																																																
3-4 Evaluate the impact of the training.																																																
【Management activities】																																																
(1) Hold Joint Coordination Committee (JCC) meetings.																																																
(3) Develop implementation plans.																																																
(2) Finalize the Objectively Verifiable Indicators and confirm on the PDM.																																																
(4) Develop and get the approval of the Work Plan.																																																
(5) Support the conclusion of the Minutes of Meeting (M/M) on training contents.																																																
(6) Develop the project progress report.																																																
(7) Support terminal evolution of the project.																																																
(8) Feed back the result of the project to TTC and support CPs if additional support were needed.																																																
(9) Develop project completion report.																																																
Expert Assignment Schedule																																																
Chief Advisor/ Training Management/ Curriculum Development 1																																																
Curriculum Development 2																																																
Industrial Automation Technology																																																
Instructional Design (Lecturer)																																																
Coordinator/ Training Management Assistance																																																

別添 3

機材供与リスト

別添 3 供与機材リスト

1. Industrial Automation Composing System (2 sets)

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
1-1	Practice of Controlling Target Machine					
	Pneumatic Air Cylinder	Power (MAX): 15W, Rating torque: 120mNm, An output gear for connections: 80φmodule=1, Source Power: 220V/50Hz	MM-VA210	1,200	2	2,400
	Speed Control Induction Motor	Power (MAX): 15W, Rating torque: 120mNm, An output gear for connections: 80φmodule=1, Source Power: 220V/50Hz	MM-VA310	1,130	2	2,260
	Reversible Motor	Drive Source: Air pressure, Angle: 180°, An output gear for connections: 80φmodule=1	MM-VA320	930	2	1,860
	Rotary Pneumatic Air Actuator	Stroke 98mm or more, Output pin: φ6mm, An output gear for connections: 80φmodule=1	MM-VA410	1,405	3	4,215
	Feed Screw	Stroke: 135mm, Two table position detection sensors, Output pin: φ6mm	MM-VM140	2,240	2	4,480
	Slide Table	Conveyor effective length: 325mm, Belt width: 25mm, Rotatory direction: CW/CCW, An output gear for connections: 80φmodule=1	MM-VM310	1,700	2	3,400
	Belt Conveyor	Table dimensions: 160mm, Two sensors for table position detection, Rotatory direction: CW/CCQ, An output gear for connections: 80φmodule=1	MM-VM320	1,590	2	3,180
	Rotary Table	Drive Source: Air pressure, Pneumatic chunk, Stroke: 30mm, Top and bottom drive: The air pressure cylinder inside diameterφ15mm, Two sensor magnetism switches for top and bottom position sensing.	MM-VM330	2,250	2	4,500
	Pneumatic Air Driven Robot Arm	Tube: φ20mm (inside), Stroke: 75mm, Output pin: φ6mm	MM-VR110	1,880	2	3,760
1-2	Control and Supporting Units					
	2-Way Photo Electric Sensor	Transmission type Sensor dimensions: 34.8x18.6x10.8mm, Detection method: 10,000mm, Setting method: Strong magnet base, Reflection type Sensor dimensions: 34.8x20x10.8mm,	MM-VS310	1,120	2	2,240

		Detection method: Multi-reflection type Detection distance: 300mm, Setting method: Strong magnet base Source Power: 220V/50Hz				
	Connecting Rods	Shaft: Stainless steel, Highly precise ball joint, the tool for connecting units mechanically.	MM-VU310	200	2	400
					Sub-total	32,695

2. Industrial Automation Composing System (Mechanism & Application)

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
2-1	Typical Application Mechanism					
	Double Pin Geneva	Division number Geneva: 8, Geneva wheel: Wheel diameter (ϕ 110.1mm), Cam groove (10.1mm \pm 5mm), Shaft position sensor input: One micro switch, Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=1	MM-VM220	2,400	1	2,400
	Spur Gear	Input-output speed ratio: 1:3 or 3:1, Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=1	MM-VM150	1,590	1	1,590
	Rack & Pinion	Motion conversion: Translatory movement \leftrightarrow Rotational movement, Output pin: ϕ 6mm, An output gear for connections: 80 ϕ module=1	MM-VA110	1,460	1	1,460
	Crank Arm	Motion conversion: Rotational movement \leftrightarrow Translatory reciprocating motion Reciprocating stroke: 34-86mm An output gear for connections: 80 ϕ module=1	MM-VM230	2,300	1	2,300
	Lever Slider	Motion conversion: Rotational movement \leftrightarrow Translatory reciprocating motion Reciprocating stroke: 89-124mm Composition detection sensor: Two micro switches AN output gear for connections: 80 ϕ module=1	MM-VM240	1,800	1	1,800
2-2	Control and Supporting Units					
	Work Slide Guide	Shoot for work piece	MM-FW270	300	2	600
	Work Piece	Color of the work: Red, Blue, Yellow, Quality of the material:	MM-FW130	10	10	100

		Aluminum, with magnet on the back				
	Magnetic Fixture	Magnet jig for fixing the units, 5 pieces in one set	MM-VB410	400	3	1,200
					Sub-total	11,450

3. Control Equipment (PLC)

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
3-1	Interface and Wiring Equipment					
	Terminal I/O Box (for Omron)	Input: 8 points, Output: 8 points, An input and output connector: '36 Centronics pins. It is with GND/a dummy switch Source Power: 220V/50Hz	MM-VC300	1,200	2	2,400
	Wireless with Connection Pins	Pin part: A spring lock, Pin diameter: Large ϕ 4mm, Small ϕ 2mm, Cable length: 1.5m	MM-VC190	300	3	900
	Data switch	Connection to switch up to four devices at Centronics, Connector: 36 Centronics pins, Number of switching: 1:4 or 4:1	DTSV4-CT	60	3	180
	Centronics Cable	Cable to connect Terminal I/O Box and Data Switch, Cable length: 5m	KPU-005K	39	3	117
					Sub-total	3,597

4. Motor Experiment Unit

5.	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
4-1	Motor Control Basic Experiment					
	Stepping Motor	Hybrid Motor Full Step/Micro Step with Terminal Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=15V Logic Voltage 24V Motor Voltage	MM-VA335	1,580	1	1,580
	DC Motor	DC Motor with Terminal Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=15V Logic Voltage 24V Motor Voltage	MM-VA390	1,680	1	1,680
4-2	AC Servo Motor	Rating output: 0.1KW, Torque rating: 0.32N*m, Rotary speed: 3000r/min, An output gear for connections: 80 ϕ module=1, Source Power: 220V/50Hz	NM-VA345 OMRON	2,660	1	2,660

					Sub-total	5,920
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5) Extra

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
5-1	Rotary Potentionmeter with BNC		MM-VC510	800	2	1,600
	Digital I/O Board USB Type		MM-VC310-USB	500	1	500
	Analog I/O Board with BNC		MM-VC590	600	1	600
					Sub-total	2,700

Total	56,362
KDV (18%)	10,145
Grand Total	66,507

別添 4

IAT 研修カリキュラム（修正版）

別添4 IAT 研修カリキュラム(修正版)

Achievement Goal:

IAT Basic	Participants will be able to explain the basic of IAT and demonstrate by simple Automation unit
IAT Intermediate	Participants will be able to design and control an IAT System
IAT Advanced	Participants will deepen the knowledge on IAT and specialize in one of the technical field such as: mechanics for IAT, electronics for IAT, IT for IAT, etc.

General Modules

		Modules	Basic	Interm	Adv	Total	Remarks
General Modules	GM01	Opening, orientation, closing, IAT introduction	12	12	10	34	
	GM02	Action Plan Development, Presentations, Follow-up	4	4	4	12	
	GM03	Field observation (Factory Visit)	12	8	4	24	For Basic one and half day, for Interm. one day, for Adv. only half day
Total Hours of General Modules			28	24	18	70	

Technical Training

Category	Lesson		Basic	Interm	Adv	Total	Contents for IAT Basic	Contents for IAT Intermediate	Contents for IAT Advanced
1. Basic Elements	BE01	Relay Control	8			8	Relay principles		
	BE02	Motor I (AC Motor)	8				3 phase AC Motor, Inverter		
	BE03	Motor II (Step)		16				Stepping motor Origin search Position control	
	BE04	Motor III (Servo)			16				AC Servo motor Encoder Speed Control Position control Torque Control Origin Search Selecting servo motor
	BE05	Pneumatics	8			8	Basic principles of pneumatic, selection of the components according the project study		
	BE06	Electro-Pneumatics	8				Comprehensive application of components, Reading electro-pneumatic circuits		
	BE07	Mechanism	8	8		16	Machine Elements, Intergration of Mechanisms, Selection of the mechanism according actuators.	CAD, Mechanism Design	
2. Control and measurement	CM01	Sensor Technology	4			4	Inductive, capacitive, optic, PNP, NPN terminologies		
	CM02	Process Control			14	14			Flow Control, TemperatureControl, PID
3. PLC Control	PL01	PLC Control	40	20		60	One cycle program, Self-keeping, Timer, Counter	PLC Commands Analog signal processing Touch Panel	
	PL02	PLC Control II	8				How to wire or cable between PLC and an automated system		
	PL03	Communication between PLCs		8	16	24		PLC and Excel PLC to PLC PLC to inverter(Modbus)	DeviceNet or Profibus communication, SCADA
IAT System	AT01	Design & Establishment of IAT System	32	36	32	100	Project: Problem solving based on the instructions	Project: Engineering solution for factory automation.	Project: Create unique automation ideas for daily use machinaries.
	AT02	Evaluation of IAT System Project	8	4	4	16	Evaluation of project according to the specified criterias	Evaluation of project according to the specified criterias	Evaluation of project according to the specified criterias
	AT03	Integration of IAT System (FMS)		4	20	24		Introduction of FMS	Programing, communication and robot control
Total Hours of Technical Training			132	96	102	330			

Remarks: Each day 8
Period/hours of 45 minutes

Total Hours	160	120	120
Total Days	20	15	15

別添 5

研修教材リスト

別添5 研修教材リスト

General Modules

"X" represents completed documents and "W" represents in progress.

No	Lesson	Syllabus	Lesson Plan	Teaching Aid			Handout			Pretest/Posttest			Feedback or Other Sheet		
		Eng	Eng	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus
GM01	Introduction to IAT	X	X	X	X	X	X	X	X		X		X	X	X
GM02	Action Plan & WBTSS	X	X	X	X	X							X	X	X
GM03	Field observation (Factory visit)	X	X										X	X	X

I. Basic Elements

No	Lesson	Syllabus	Lesson Plan	Teaching Aid			Handout			Pretest/Posttest			Feedback or Other Sheet		
		Eng	Eng	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus
BE01	Motor 1:AC Motor Relay_Timer_Counter Motor_Inverter	X	X	X	△	X	X	X	X	X	X	X	X	X	X
BE02	Motor 2:Motor Exercises	X	X												
	Pneumatic 1			X	X	X	X	X	X	X	X	X	X	X	X
BE03	Pneumatic 2_ Exercises	X	X				X	X	X	X	X	X	X	X	
	Machanism			X	X	X	X	X	X	X	X	X	X	X	X
	Machine Elements			X	X	X	X	X	X	X	X	X	X	X	

II. Control and measurement

No	Lesson	Syllabus	Lesson Plan	Teaching Aid			Handout			Pretest/Posttest			Feedback or Other Sheet		
		Eng	Eng	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus
CM01	Sensor Technology	X	X	X	X	X	X	X	X	X	X	X	X	X	X

III. PLC Control

No	Lesson	Syllabus	Lesson Plan	Teaching Aid			Handout			Pretest/Posttest			Feedback or Other Sheet		
		Eng	Eng	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus
PL01	PLC 1:PLC Introduction	X	X	X	X	X	X	X	X	W	X	W	X	X	X
	PLC 2:PLC_CX Programmer						X	X	X						
	PLC 3:Flow Control														
	PLC 4:Project I														
	PLC 5:PLC Control Exercises														

IV. IAT

No	Lesson	Syllabus	Lesson Plan	Teaching Aid			Handout			Pretest/Posttest			Feedback or Other Sheet		
		Eng	Eng	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus	Tr	Eng	Rus
AT01	Operation of IAT System	X	X	X	X	X	X	X	X				X	X	X
AT02	IAT System Design	X	X	X	X	X	X	X	W				X	X	X
	IAT System Design_Design in Aut. Project II			X	X	X	X	X							

別添 6

TCTP コース・スケジュール 2012-2015

別添6 TCTP コース・スケジュール 2012-2015

The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries in the Republic of Turkey

A. Group Training Program

	Course Title	Country		Participants	Attended Participants		Days	Starting Date		Ending Date	
1	Group Training for TVE Managers	Afghanistan	2	10	2	8	2-week	2012/11/5	Mon	2012/11/16	Fri
		Kyrgyzstan	2		2						
		Palestine	2		2						
		Tajikistan	2		2						
		Turkmenistan	2		0						
2	Group Training for TVE Trainers: IAT Basic 2013 A	Kyrgyzstan	3	14	2	11	4-week	2013/4/15	Mon	2013/5/10	Fri
		Tajikistan	4		3						
		Turkmenistan	4		4						
		Uzbekistan	3		2						
3	Group Training for TVE Trainers: IAT Basic 2013 B	Afghanistan	5	10	0	7	4-week	2014/1/6	Mon	2014/1/31	Fri
		Palestine	5		7						
4	Group Training for TVE Trainers: IAT Basic 2014 A	Kyrgyzstan	4	13	5	10	4-week	2014/4/14	Mon	2014/5/9	Fri
		Tajikistan	3		3						
		Turkmenistan	3		2						
		Uzbekistan	3								
5	Group Training for TVE Trainers: IAT Basic 2014 B	Afghanistan	5	10		5	4-week	2014/11/10	Mon	2014/12/5	Fri
		Palestine	5		5						
6	Group Training for TVE Trainers: IAT Basic 2015 A	Kyrgyzstan	3	13	5	10	4-week	2015/1/5	Mon	2015/1/30	Fri
		Tajikistan	3		5						
		Turkmenistan	3		0						
		Uzbekistan	4		0						
Total				70		51	A: Russian Course, B: English Course				

B. Country Focused Training Program

	Course Title	Country		Participants	Attended Participants		Days	Starting Date		Ending Date	
1	Country Focused Training for Executive Managers	Azerbaijan	1	4	1	4	1-week	2012/11/5	Mon	2012/11/9	Fri
		Kazakhstan	1		1						
		Pakistan	2		2						
2	Country Focused Training for TVE Manager	Azerbaijan	7	15	7	15	2-week	2012/11/5	Mon	2012/11/16	Fri
		Kazakhstan	8		8						
3	Country Focused Training for TVE Trainers: IAT Basic	Pakistan	10	10	10	10	3-week	2012/12/3	Mon	2012/12/21	Fri
4	Country Focused Training for TVE Trainers: IAT Basic	Kazakhstan	12	12	12	12	4-week	2013/6/3	Mon	2013/6/28	Fri
5	Country Focused Training for TVE Trainers: IAT Basic	Azerbaijan	12	12	9	9	4-week	2013/9/16	Mon	2013/10/11	Fri
6	Country Focused Training for TVE Trainers: IAT Intermediate	Pakistan	10	10	10	10	3-week	2013/11/4	Mon	2013/11/22	Fri
7	Country Focused Training for TVE Trainers: IAT Intermediate	Kazakhstan	12	12	12	12	3-week	2014/6/2	Mon	2014/6/20	Fri
8	Country Focused Training for TVE Trainers: IAT Intermediate	Azerbaijan	10	10	6	6	4-week	2014/10/13	Mon	2014/11/7	Fri
9	Country Focused Training for TVE Trainers: IAT Advanced	Pakistan	10	10	9	9	3-week	2014/12/8	Mon	2014/12/26	Fri
Accumulated Total				95		87					

別添 7

TCTP 評価概要

別添 7. TCTP 評価概要

Summary of Evaluation of the TCTP

I. Overview:

In the first year, the Project team developed the evaluation framework of the training program based on Kirkpatrick Model (For more detail, see Table 1). The training program is evaluated by six different evaluation tools: (A) Module Evaluation, (B) Overall Evaluation, (C) Evaluation Meeting, (D) Learning Performance Evaluation, (E) Progress of the Action Plan and (F) Monitoring Survey. The 1st level of the Kirkpatrick Model, the satisfaction of the participants is evaluated through (A) Module Evaluation, (B) Overall Evaluation, and through (C) Evaluation Meeting. The 2nd level, the learning performance of the participants are evaluated through (D) Learning Performance Evaluation, which consists of Pre-post Test, Project Work and Observation of by the trainers (For more detail, see Table 2). The 3rd level, the impacts of the training are evaluated through (E) Progress of the Action Plan and (F) Monitoring Survey.

Table 1: Kirkpatrick Evaluation Model and Evaluation Tool

Evaluation level		Contents	Evaluation Tool
1 st level	Reaction	To what degree participants react favourably to the training.	-Questionnaires: (A) Module Evaluation (B) Overall Evaluation (C) Evaluation Meeting
2 nd level	Learning	To what degree participants acquire the intended knowledge, skills, and attitude based on their participation in a training event.	(D) Learning Performance Evaluation: consist of following assessment methods: Pre-post Test, Project Work and Observation by the trainers
3 rd level	Behaviour	To what degree participants apply what they learned during training when they are back on the job.	(E) Progress of the Action Plan (F) Monitoring Survey
4 th level	Result	To what degree targeted outcomes occur as a result of the training event and subsequent reinforcement.	

II. Details of Evaluation Tools:

(A) Module Evaluation:

The objective of the Module Evaluation is to identify effectiveness and weakness of the module and its factors. This tool is mainly used for lecturers to improve each module

(B) Overall Evaluation:

The objective of the Overall Evaluation is to identify effectiveness of the training course and efficiency of the course management. This tool is mainly used to assess satisfaction of the participants in terms of course content, course management and accommodation service.

(C) Evaluation Meeting:

The Evaluation Meeting is conducted on the last day of the training, in order for the Project to hear voices from the participants directly. The results are included in Course Report.

(D) Learning Performance Evaluation ver.4:

The Learning Performance Evaluation is to evaluate the achievement of the participants, in terms of knowledge and skills regarding IAT. It is evaluated according to the table 2 below. These criteria were set in October 2013 by the Project as ver3. Previous trainings were evaluated through old

version of the Learning Performance Evaluation Tool in trial basis.

Table 2a: Criteria for Learning Performance Evaluation

Assessment Method	Type	Mark	Weight	Total
1. Pre & Post Test	Individual	100	0.3	30
2. Project Work	Group	100	0.5	50
3. Observation by the trainers to evaluate attitude & participation	Individual	100	0.2	20
		100%		100

*This criteria is in use from November 2013: CFT Pakistan IAT Intermediate and from December 2014 CFT Pakistan IAT Advanced.

Other factors which may affect the result of above evaluation:

- Course Design: objective and curriculum
- Participants Qualification or background
- Quality of the Trainers' Training Skills
- Quality of the Training Material
- Evaluation Methods
- Participants Effort

The Learning Performance Evaluation system was changed in TCTP Curriculum Development Workshop that was held in Marmaris on June 24-27, 2014. New system is given below as ver4.

Table 3b: Criteria for Learning Performance Evaluation-newest version

Assessment Method	Type	Mark	Weight	Total
1. Pre & Post Test	Individual	100	0.4	40
2. Project Work	Group	100	0.4	40
3. Factory evaluation	Individual	100	0.2	20
		100%		100

*This criteria is in use from October 2014: CFT Azerbaijan IAT Basic

In project work criteria, participants made project as a group, but were evaluated by individually giving answers about other project's problems.

Factory evaluation criteria were tested by real factory application. Participants saw real factory applications in factory visit, then they watched video about it and then gave answers to the questions in factory evaluation test.

(E) Progress of the Action Plan & (F) Monitoring Survey:

For CFT for TVE Trainers, basically the same participants are invited to the course every year; because the following course is build up on the skills learnt in the previous course. In the first course for the TVE Trainers, IAT Basic, an action plan is developed and it is updated in the following courses. For example, there are three courses for Pakistan participants: Basic, Intermediate and Advanced courses, and two courses for Kazakhstan participants: Basic and Intermediate course. For Azerbaijan, Basic course will be conducted for two times for different participants. The progress of the Action Plan is assessed to see the result of the training courses.

Monitoring Survey is conducted to both CFT and GT to assess what degree the participants apply their knowledge after returning to their home countries.

III. Implementation of Training Courses and Evaluation:

The Project team developed the evaluation framework of the training program in the first year. However, the framework was not applied to the first three courses, because the target of those courses was TVE administrators, and the objective of the course was not to train IAT subject but to obtain their understanding on IATE Project.

The framework was applied on trial basis to the technical training courses, which started from December 2012. Especially, for evaluation tool (D), Learning Performance Evaluation, the trail version was used from fourth course in the table 3: CFT Pakistan IAT Basic conducted in December 2012, to seventh course: CFT Azerbaijan IAT Basic course conducted in September 2013. New framework was applied as decided in Marmaris workshop in June-2014, which started from October 2014. (See Table 3 for more details).

Table 4: Implementation of Training Courses until March 2015

Course Title		Target	Training Period	Evaluation	
1	CFT	CFT for Executive Managers	TVE Administrators	2012/11/05-2012/11/09	(B*), (C)
2	CFT	CFT for TVE Managers	TVE Administrators	2012/11/05-2012/11/16	(B), (C)
3	GT	GT for TVE Managers	TVE Administrators	2012/11/05-2012/11/16	(B)
4	CFT	CFT Pakistan IAT Basic	TVE Trainers	2012/12/03-2012/12/21	(A), (B), (C), (D1)
5	GT	GT IAT Basic 2013 A*	TVE Trainers	2013/04/15-2013/05/10	(A), (B), (C), (D1)
6	CFT	CFT Kazakhstan IAT Basic	TVE Trainers	2013/06/03-2013/06/28	(A), (B), (C), (D2)
7	CFT	CFT Azerbaijan IAT Basic	TVE Trainers	2013/09/16-2013/10/11	(A), (B), (C), (D2)
8	CFT	CFT Pakistan IAT Intermediate	TVE Trainers	2013/11/04-2013/11/22	(A), (B), (C), (D3a)
9	GT	GT IAT Basic 2013 B*	TVE Trainers	2014/01/06-2014/01/31	(A), (B), (C), (D3a)
10	GT	Group Training for TVE Trainers: IAT Basic 2014 A	TVE Trainers	2014/04/04-2014/05/09	(A), (B), (C), (D3a)
11	GT	Group Training for TVE Trainers: IAT Basic 2014 B	TVE Trainers	2014/11/10-2014/12/05	(A), (B), (C), (D3b)
12	GT	Group Training for TVE Trainers: IAT Basic 2015 A	TVE Trainers	2015/01/05-2015/01/30	(A), (B), (C), (D3b)
13	CFT	Country Focused Training for TVE Trainers: IAT Intermediate	TVE Trainers	2014/06/02-2014/06/20	(A), (B), (C), (D3a)
14	CFT	Country Focused Training for TVE Trainers: IAT Basic	TVE Trainers	2014/10/13-2014/11/07	(A), (B), (C), (D3b)
15	CFT	Country Focused Training for TVE Trainers: IAT Advanced	TVE Trainers	2014/12/08-2014/12/26	(A), (B), (C), (D3a)

(A): Module Evaluation, (B) Overall Evaluation, (C) Evaluation Meeting, (D) Learning Performance Evaluation

Remarks:

- (B*) and (B): Overall Evaluation used in Executive Manager course was different from others.
- (D1) and (D2): Previous versions of Learning Performance Evaluation used in trial basis.
- D3a is for table2a and D3b is for table2b
- GT IAT Basic A*: Course Language in Russian
- GT IAT Basic B*: Course Language in English

IV. Result of (B) Overall Evaluation and (D) Learning Performance Evaluation:

(B) Overall Evaluation:

The question 1 to 10 in Overall Evaluation was categorized in three topics: Course Content, Course Management and Accommodation. The satisfaction of the participants was evaluated in four levels. For one question (Q4), it was to be answered in yes or no.

The result of the Evaluation is written in Table 4 below. The table shows the percentage of the participants who answered positively to the questions: for example, answered “very much” or “some extent” in four level evaluation (See attachment 3 for more details). According to the table below, more than 80% of the participants in each course were satisfied in terms of course content and course management. Regarding Accommodation, more than 90% of the participants who stayed in hotel (first five courses) were satisfied, and more than 75% of the participants in two courses out of three, which stayed in TTC, were satisfied. However in one course, only 20% of the participants were satisfied.

This was due to transition period of the TTC management from Mazhar Zorlu Technical Industrial Vocational High School to Nevvar Salih Isgoren Hotel Business and Tourism Vocational High School (hereinafter TVH). As explained more in Annex 15, the situation of the TTC Guesthouse Facilities had improved and satisfaction of the following course increased to 100% participants.

Table 5: Result of Overall Evaluation for Implemented Courses until April 2015

Course Title		Course Content	Course Management	Accommodation	Remarks
1	CFT for TVE Managers	99	94	100	Stayed in hotel
2	GT for TVE Managers	98	91	100	Stayed in hotel
3	CFT Pakistan IAT Basic	98	86	100	Stayed in hotel
4	GT IAT Basic 2013 A*	85	95	91	Stayed in hotel
5	CFT Kazakhstan IAT Basic	88	96	100	Stayed in hotel
6	CFT Azerbaijan IAT Basic	89	90	78	Stayed in TTC
7	CFT Pakistan IAT Intermediate	96	93	20	Stayed in TTC
8	GT IAT Basic 2013 B*	91	95	100	Stayed in TTC
9	Group Training for TVE Trainers: IAT Basic 2014 A	100	100	100	Stayed in TTC
10	Group Training for TVE Trainers: IAT Basic 2014	100	92	100	Stayed in TTC

	B				
11	Group Training for TVE Trainers: IAT Basic 2015 A	98	100	100	Stayed in TTC
12	Country Focused Training for TVE Trainers: IAT Intermediate	100	100	100	Stayed in TTC
13	Country Focused Training for TVE Trainers: IAT Basic	100	100	100	Stayed in TTC
14	Country Focused Training for TVE Trainers: IAT Advanced	100	100	100	Stayed in TTC

(D) Learning Performance Evaluation:

The criteria for Learning Performance Evaluation were clarified in the Project team meeting in October 2013 (Version 3) and was changed in TCTP Curriculum Development Workshop that was held in Marmaris on June 24-27, 2014 (Version 4). The new criteria was developed as version 4 and put in use from CFT Azerbaijan IAT Basic course in October 2014. The result of the evaluation was as follow:

I. Result of CFT Azerbaijan IAT Basic 2014

According to the Course Report and the Result of Learning Performance Evaluation, 3 of 6 participants achieved upper scores than the score of 70%, which the minimum requirement for the course. Average score was 68%. In this course, 50% of the participants achieved the 70% of the learning performance, which is unsatisfied for indicator 2.2 of the PDM.

II. Result of Group Training IAT Basic 2014 B

According to the Course Report and the Result of Learning Performance Evaluation, all 5 participants achieved upper scores than the score of 70%, which the minimum requirement for the course. Average score was 82%. In this course, 100% of the participants achieved the 70% of the learning performance, which is satisfied for the indicator 2.2 of the PDM.

III. Result of Country Focused Training IAT Advanced 2014

According to the Course Report and the Result of Learning Performance Evaluation, all 9 participants achieved upper scores than the score of 70%, which the minimum requirement for the course. Average score was 81%. In this course, 100% of the participants achieved the 70% of the learning performance, which is satisfied for the indicator 2.2 of the PDM.

IV. Result of Group Training IAT Basic 2015 A

According to the Course Report and the Result of Learning Performance Evaluation, all 10 participants achieved upper scores than the score of 70%, which the minimum requirement for the course. Average score was 77%. In this course, 100% of the participants achieved the 70% of the learning performance, which is satisfied for the indicator 2.2 of the PDM.

III. Previous Evaluation & Result

Before Learning Performance Evaluation Tool was revised to fourth version, the achievement of the participants was evaluated according to the following criteria:

Table 6: Learning Performance Evaluation Version and Evaluation Methods

Version	Utilized Period	Course Title	Evaluation	Problem
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			Methods	
Version 1	December 2012 -May 2013	- CFT Pakistan IAT Basic -GT IAT Basic 2013 A	Pre-Post Test Attendance	Understanding of the participant was checked by the Pre-Post Test. However, the minimum requirement of the achievement was not clearly set.
Version 2*	June 2013 - October 2013	-CFT Kazakhstan IAT Basic -CFT Azerbaijan IAT Basic	Pre-Post Test and Project Work	The minimum requirement was not clearly set.
Version 3*	November 2013 – June 2014	-CFT Pakistan Intermediate -GT IAT Basic 2013 B -CFT IAT Intermediate 2014 -CFT IAT Advanced 2014	Pre-Post Test, Project Work, Observation by the trainers	Project work was not evaluated clearly and effectively. Factory applications were not evaluated.
Version 4*	June 2014 –	-CFT Azerbaijan IAT Basic 2014 -Group Training IAT Basic 2014 B -Group Training IAT Basic 2015 A	Pre-Post Test, Project Work, -Factory evaluation	

*The curriculum of the IAT Basic course for CFT and GT was drastically changed in May 2013, and the Project Work was added to the curriculum. In keeping with those changes Learning Performance Evaluation criteria were changed from Ver.1 and Ver.2.

*Ver.3 was developed in October 2013, because the criteria for the achievement were not clear for Ver.2.

*Ver.4 was developed on June 2014, because IAT Basic Course schedule was divided into two parts and evaluation criteria were changed as IAT basic lessons and project work were implemented in part1 and real factory applications were implemented in part2.

別添 8

フォローアップの結果

別添 8 フォローアップの結果

Results of Follow Up of the participants

Aim: This evaluation aims to measure the degree of Attainment ratio by the Action Plan made by the trainees during the training period at TTC and to measure the effectiveness of the training.

Method of Survey: After Training 3 month send an email or Direct mail with “Activities Follow-up Questionnaire” (See to Aneex1.)to participants. After that follow up “Activities Follow-up Questionnaire” up to 6 month. and make to summary report of monitoring survey.

Target of Survey: Among 15 courses conducted as of February 2015, following 9 courses were the target of this survey; CFT for TVE Manager: (Russian) Nov 5, 2012 – Nov 16, 2012 (2-week), CFT for TVE Trainers: IAT Basic (English) Dec 03,2012-Dec21,2012(3weeks), GT for TVE Trainers: IAT Basic 2013 A (Russian) April 15, 2013 – May 10, 2013(4-week), CFT for TVE Trainers: IAT Basic (Russian) Jun03,2013-Jun23,2013 (3weeks), CFT for TVE Trainers: IAT Basic (Turkish) Sept16,2013-12Oct,2013 (4weeks), CFT for TVE Trainers: IAT Intermediate (English) Dec 03,2013-Dec23,2013 (3weeks), GT for TVE Trainers: IAT Basic 2013 B (English) January 6, 2014 – January 31, 2014 (4-week), GT for TVE Trainers: IAT Basic 2014 A (Russian) April 14, 2014 – May 9, 2014 (4-week), CFT for TVE Trainers: IAT Intermediate (Russian), Jun02,2014-Jun20,2014 (3weeks) IAT Basic A. 2 courses; CFT for Executive Managers and GT for TVE Managers, were excluded from the survey. For the following courses; CFT for TVE Trainers: IAT Basic (Turkish) Oct13,2014-7 Nov ,2014 (4weeks) , GT for TVE Trainers: IAT Basic 2014 B (English) January 6, 2014– January 31, 2014 (4-week) , CFT for TVE Trainers: IAT Intermediate (English) Dec 08,2014-Dec26,2014 (3weeks), GT for TVE Trainers: IAT Basic 2015 A (Russian) Jan 5, 2015 – Jan 30, 2015 (4-week) will be analyzed in the future.

Total number of participants who reply: Out of the 96 targeted for the study, only 40 people responded and returned the questionnaire. The collection rate for the entire study was 42%. Table 1 below is the “Breakdown of the Respondents from each Course”.

Table 1 below is the “Breakdown of the Respondents from each Course”

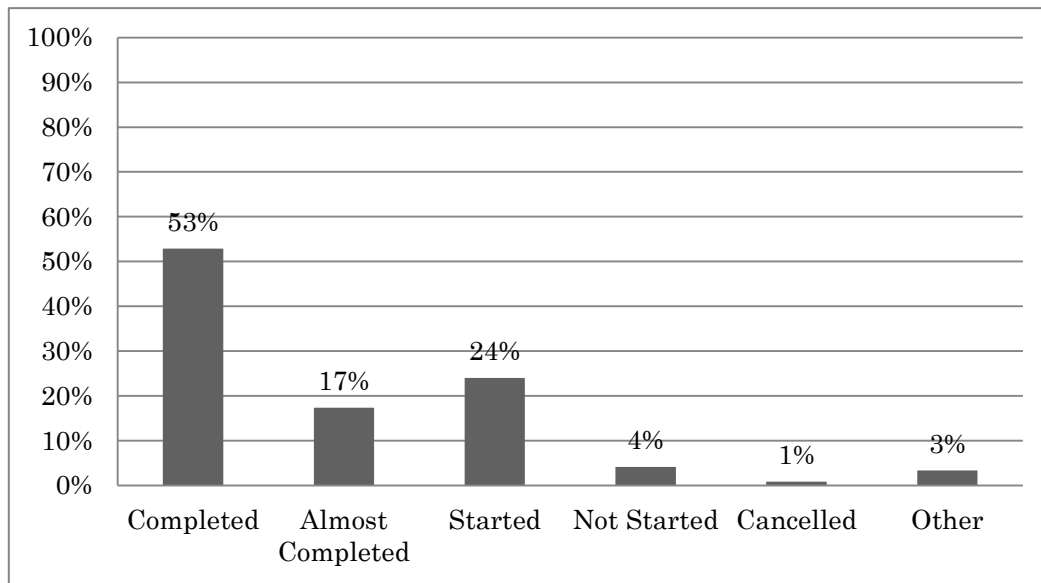
Course Title (Language and Period)	Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
CFT for TVE Manager: (Russian) Nov 5, 2012 – Nov 16, 2012 (2-week)	Azerbaijan(7)	15	Azerbaijan(4)	4	27%
	Kazakhstan(8)		Kazakhstan(0)		
CFT for TVE Trainers: IAT Basic (English) Dec 03,2012-Dec21,2012(3weeks)	Pakistan(10)	10	Pakistan(10)	10	100%

GT for TVE Trainers: IAT Basic 2013 A (Russian) April 15, 2013 – May 10, 2013 (4-week)	Kyrgyzstan(2)	11	Kyrgyzstan(2)	6	55%
	Tajikistan(3)		Tajikistan(3)		
	Turkmenistan(4)		Turkmenistan(1)		
	Uzbekistan(2)		Uzbekistan(0)		
CFT for TVE Trainers: IAT Basic (Russian) Jun03,2013-Jun23,2013 (3weeks)	Kazakhstan(12)	12	Kazakhstan(3)	3	25%
CFT for TVE Trainers: IAT Basic (Turkish) Sept16,2013-12Oct,2013 (4weeks)	Azerbaijan(9)	9	Azerbaijan(2)	2	%22
CFT for TVE Trainers: IAT Intermediate (English) Dec 03,2013-Dec23,2013 (3weeks)	Pakistan(10)	10	Pakistan(5)	5	50%
GT for TVE Trainers: IAT Basic 2013 B (English) January 6, 2014 – January 31, 2014 (4-week)	Palestine(7)	7	Palestine(2)	2	29%
	Afghanistan(0)		Afghanistan(0)		
GT for TVE Trainers: IAT Basic 2014 A (Russian) April 14, 2014 – May 9, 2014 (4-week)	Kyrgyzstan(5)	10	Kyrgyzstan(2)	2	20%
	Tajikistan(3)		Tajikistan(0)		
	Turkmenistan(2)		Turkmenistan(0)		
	Uzbekistan(0)		Uzbekistan(0)		
CFT for TVE Trainers: IAT Intermediate (Russian) Jun02,2014-Jun20,2014 (3weeks)	Kazakhstan(12)	12	Kazakhstan(6)	6	50%
<i>CFT for TVE Trainers: IAT Basic (Turkish) Oct13,2014-7 Nov ,2014 (4weeks)</i>	<i>Azerbaijan(6)</i>		<i>Azerbaijan()</i>	<i>Waiting for Replies</i>	
<i>GT for TVE Trainers: IAT Basic 2014 B (English) January 6, 2014 – January 31, 2014 (4-week)</i>	<i>Palestine(5)</i>		<i>Palestine()</i>	<i>Impact Survey did not send yet</i>	
	<i>Afghanistan(0)</i>		<i>Afghanistan()</i>		
<i>CFT for TVE Trainers: IAT Intermediate (English) Dec 08,2014-Dec26,2014 (3weeks)</i>	<i>Pakistan(9)</i>		<i>Pakistan()</i>	<i>Impact Survey did not send yet</i>	
<i>GT for TVE Trainers: IAT Basic 2015 A (Russian) Jan 5, 2015 – Jan 30, 2015 (4-week)</i>	<i>Kyrgyzstan(5)</i>		<i>Kyrgyzstan()</i>	<i>Impact Survey did not send yet</i>	
	<i>Tajikistan(5)</i>		<i>Tajikistan()</i>		
	<i>Turkmenistan(0)</i>		<i>Turkmenistan()</i>		
	<i>Uzbekistan(0)</i>		<i>Uzbekistan()</i>		
Total		96		38	42%

This summary is made up of and importance placed on the “Degree of Attainment ratio of the Action Plan” and “Effectiveness of the Training at TTC”, based on information obtained from the Questionnaires (See to Attachment2 : Questionnaire of each course), which is summed up per course.

Below is the graph showing the total result of the four courses. Among 125 actions formed by 40 participants, 53% completed, 17% almost completed and 24% had started. Thus 100% of the action plans were followed. From the

result, it can be concluded that the training at the TTC was effective.



Achievement level of action plan (N=125)

The results of the each course are summarized in the next section.

Summary of CFT for TVE Manager (Azerbaijan and Kazakhstan)

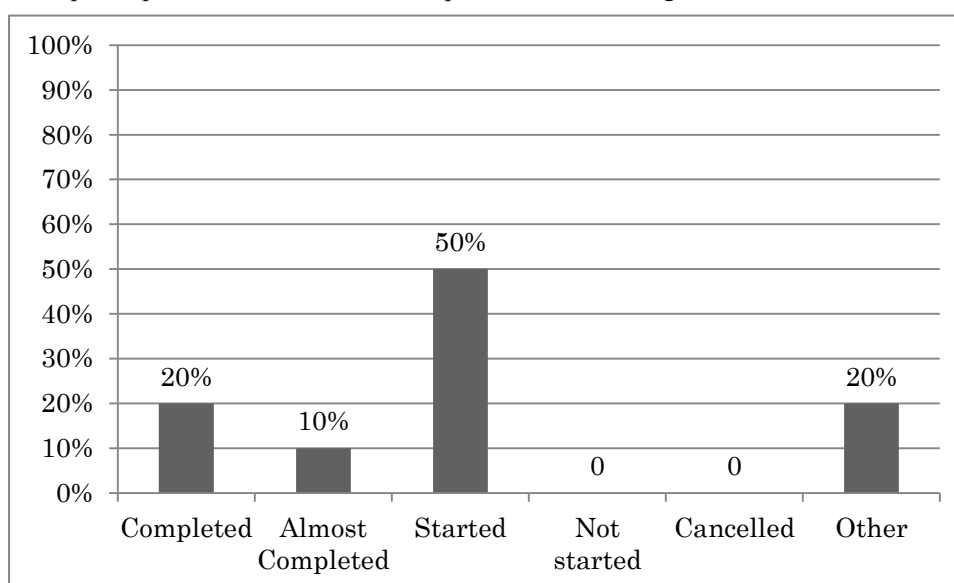
Nov 5, 2012 – Nov 16, 2012 (2-week)

1) Number of participants who reply: 4 participants

Country (No. of Participants)	Total Participated	Each country Reply (No. of reply)	Total no. of Reply Participants	% of Reply
Azerbaijan(7)	15	Azerbaijan(4)	4	27%
Kazakhstan(8)		Kazakhstan(0)		

2) Progress of Action plan:

Four participants formed a total of ten plans. The following is the attainment status.



Graph1. Achievement of action plan (N=10)

The attainment ratio has already started with 80% of which 20% of the activities has already been completed. It can be said to be a good attainment status. The participants of this course are TVE managers and their main activity after they return to their countries was to coordinate the venue and equipment of the IAT Training, and the personnel who would sent to future trainings. Judging from the fact that after returning to their countries, TVE Trainers from these countries have participated in the TTC Training as planned, it would seem that their activities are smoothly being implemented.

3) Effectiveness of the TTC training:

1 out of 4 participants have conducted a lecture on “Automation, Industrial Control Technology” for 180 hours to a group of 40 people. The TTC Training triggered the widening of the scope of the IAT and it was noted by these participants that widening the viewpoint of the training content was very helpful.

As for the other participants, since the target were TVE managers, from their positions, it can be expected that the IAT Training (Workshop Seminar) would not be held very often. Judging from their comments that by

participating in this TTC Training, they were able to improve their knowledge (Training venue, equipment, etc.) in how to set up the IAT course, which helped in planning, the TTC Training was effective.

Consideration

The factors for the low Questionnaire collection rate for this course are that the participants of this course were managers and they were from Russian speaking countries. Especially for Kazakhstan, the rate was 0%. There is the fact that it was just right after establishing the support using WBTSS, the environment was not ready, it seldom functioned and the situation could not be grasped clearly at the beginning. However, after that, through the TVE Trainers who were sent to the TTC Training from the same countries, it became easier to grasp the situation in Kazakhstan. Also, as part of the follow-up, the TTC Lecturers plan to send someone to Kazakhstan and expect an active exchange of skills from now on.

Summary of CFT for TVE Trainers: IAT Basic (Pakistan)

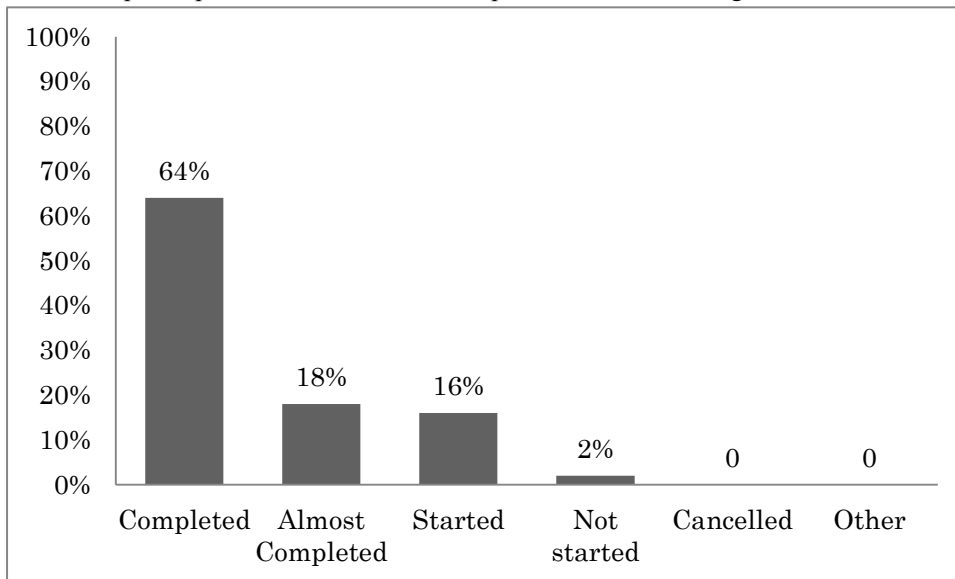
Dec 03,2012- Dec21,2012(3weeks)

1) Number of participants who reply: 10 participants

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Pakistan (10)	10	Pakistan (10)	10	100%

2) Progress of Action plan:

10 of the participants formed a total of 45 plans. The following is the attainment status.



Graph2. Achievement of action plan (N=45)

The attainment ratio has already started with 98% of which 64% of the activities has already been completed. We can conclude that the results were very outstanding results. Furthermore, communication with the lecturers from Turkey using the WBTSS was also very active. A very ideal follow-up of the course is being conducted. The factors for this are probably the Pakistan Trainees' high level towards IAT and that direct communication in English is possible.

3) Effectiveness of the TTC training:

7 out of the 10 participants conducted a lecture and practical training for about 460 people in their workplace after they returned to their countries. There were many comments saying that many of what they have learned and the practical training they have experienced at TTC were included in those trainings, and especially in the training for faculty members, it largely contributed to an improvement in skills in how to conduct a practical training, specifically the lecturing technique and instruction content. From these, it can be judged that the effect of the TTC Training is expanding and is very efficient.

Consideration:

The activities of the Pakistan trainees after returning home is proceeding smoothly, and their experience at the TTC Training is effectively being used. Even in the follow-up after the TTC Training, the WBTSS was actively being used and the form of information exchange was ideal. This was probably influenced by the completely ready environment, the factors I have mentioned above: the high IAT level of the trainees and the ability to communicate directly in English. TTC is planning to increase the skill level of the intermediate and advanced course, and the IAT, and conduct training for countries that have the foundation to absorb skills like these. Especially in Pakistan, which has a high need for the training of teachers, members of the TTC faculty would need to have more advanced instruction capabilities. Depending on the case, TTC faculty may also need to have technical support to improve their skills.

↓ Situation of training that was sent from the participant



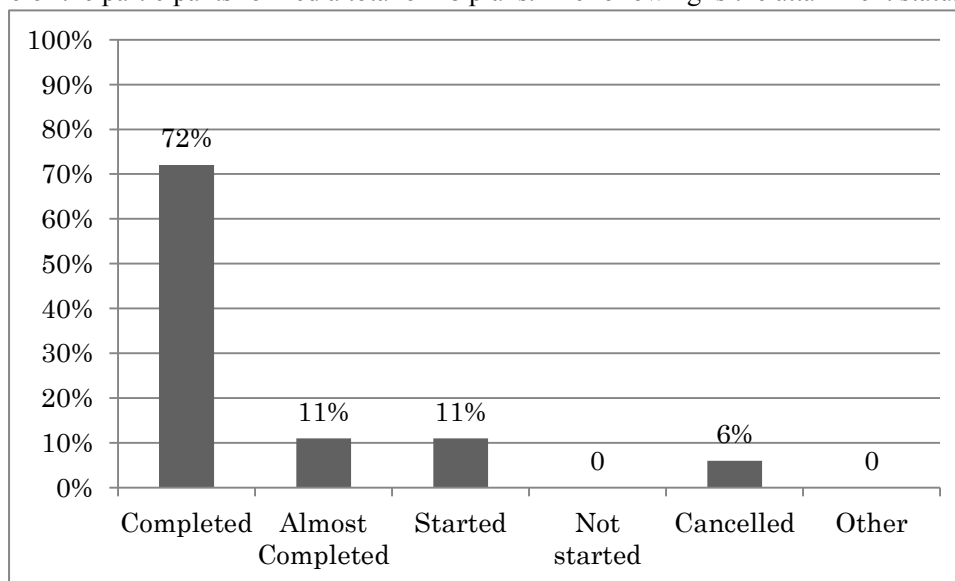
Summary of GT for TVE Trainers: IAT Basic (Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan)

April 15, 2013 – May 10, 2013(4-week)

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Kyrgyzstan(2)	11	Kyrgyzstan(2)	6	55%
Tajikistan(3)		Tajikistan(3)		
Turkmenistan(4)		Turkmenistan(1)		
Uzbekistan(2)		Uzbekistan(0)		

2) Progress of Action plan:

6 of the participants formed a total of 18 plans. The following is the attainment status.



Graph3. Achievement of action plan (N=18)

The attainment ratio has already started with 94% of which 72% of the activities has already been completed. 1 Tajikistan Trainee's Action Plan was cancelled, but the activity that was planned to be conducted was already being conducted, so there was no reason to conduct it anymore. Looking at it comprehensively, it can be said that their activities are definitely moving forward.

3) Effectiveness of the TTC training:

After returning to their country, 6 out of the 11 participants conducted lectures and practical trainings for about 427 teachers and students. At those trainings, many of the subjects and practical training that was learned at TTC were included. Also, there was a comment that after returning to their country, as an expert in the IAT field, they were given an important work by their country. Their work load of giving lectures and practical training increased sharply. It can be said that this is the influence of the TTC Training. There were also comments that mentioned they conducted a Teacher Training and after the lecture, different discussions related to IAT Training were opened where the situation and problems of their own country (shortage of equipment for students, etc.) became clear.

From these things, it can be said that TTC Training served as an indicator for the direction of the future of IAT Training in their country. From these things, it can be said that TTC Training served as an indicator for the direction of the future of IAT Training in their country.

Consideration:

The activities of the trainees who replied was good in general. However, in countries that have Group Training, the participants are different each time, making it a one-time training. Follow-up becomes only WBTSS and, in the case of Russian speaking countries, it is very difficult to conduct a follow-up survey with trainees who could not be contacted. Since the number of participants is few and also various situations are assumed for every country , it is very difficult to have a follow-up evaluation.

Summary of CFT for TVE Trainers: IAT Basic (Kazakhstan)

Jun 03,2012- Jun28,2013(4weeks)

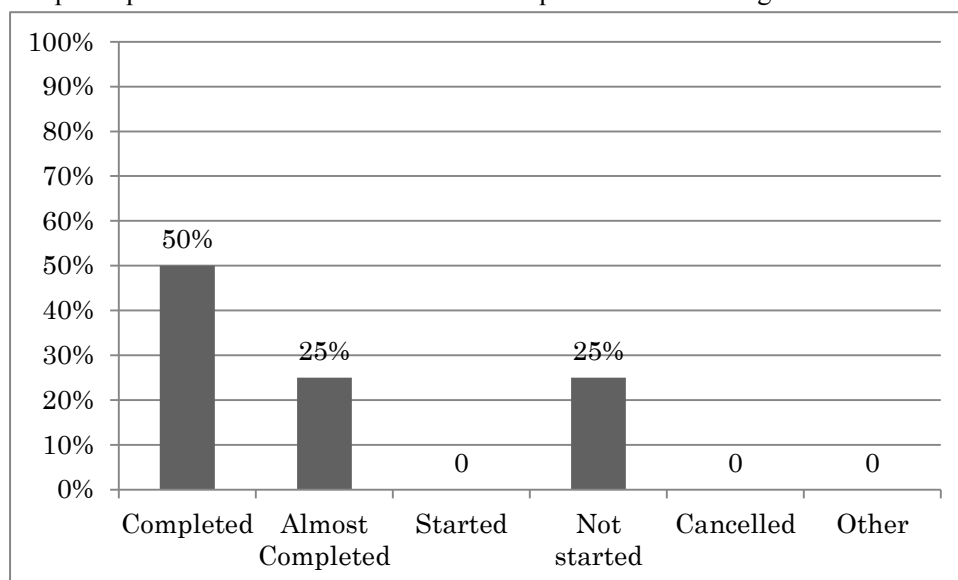
1) Number of participants who reply: 3 participants

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Kazakhstan (12)	12	Kazakhstan (3)	3	25%

At the Kazakhstan Training, a total of 4 schools participated as a group with 3 people from each school. As a result, the Action Plan was not made individually. A total of 4 plans were made, one from each school. Only one school responded to the Questionnaire.

2) Progress of Action plan:

The participants of 1 school formed a total of 4 plans. The following is the attainment status.



Graph4. Achievement of action plan (N=4)

The attainment ratio has already started with 75% of which 50% of the activities of the activities has already been completed. At the time the Questionnaire was collected, 25% of the activities have not been commenced, yet, but from the comment in the Questionnaire, presently, it can be presumed that it was carried out after the teaching materials were prepared. From these, it can be said that their activities are definitely moving forward.

3) Effectiveness of the TTC training:

After returning to their country, 3 participants from 1 school all cooperated and reported about the TTC training outline to about 80 faculty at the place of work. Also, a seminar on “Industrial automation program” was held for about 20 IAT related teachers and an approval to conduct IAT Seminar within the school in the future was given. From this, is expanding and it can be said that the training content conducted at TTC is expanding and was effective.

Consideration:

Because the participants of this course were from Russian speaking countries, the Questionnaire collection rate was very low. Also because of this language problem, the support using WBTSS was not very effective and the condition could not be clearly grasped. However, after that, taking advantage of the commencement of a JICA related project of similar field in Kazakhstan, a connection could now be made and the situation could somewhat be shared. This fiscal year, TTC faculty members are scheduled to be sent to these schools as a follow-up, and meticulous onsite support is being attained.

Summary of CFT for TVE Trainers: IAT Basic (Azerbaijan)

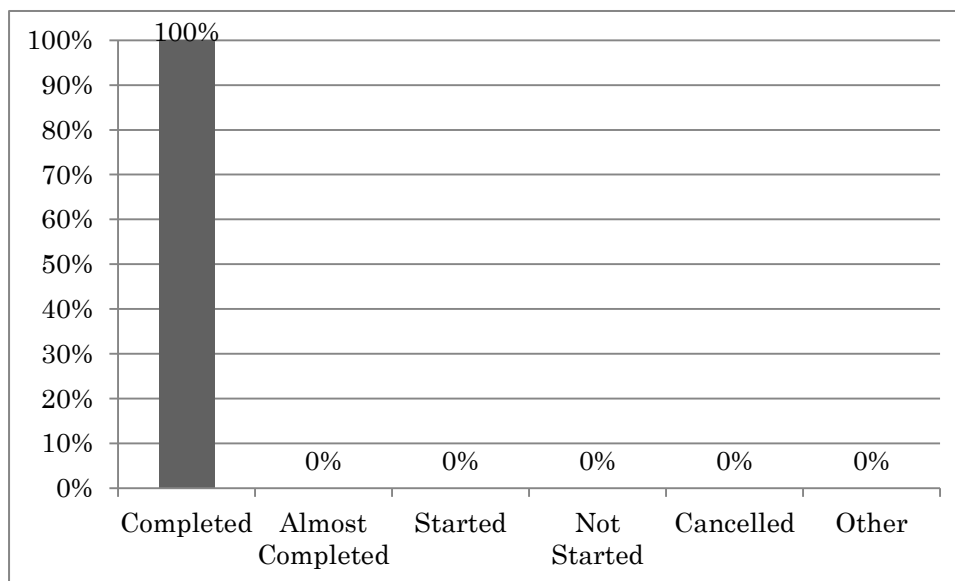
Sept16,2013-12Oct,2013 (4weeks)

1) Number of participants who reply: 2 participants

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Azerbaijan (9)	9	Azerbaijan (2)	2	22%

2) Progress of Action plan:

The participants of 2 school formed a total of 4 plans. The following is the attainment status.



Graph5. Achievement of action plan (N=4)

The attainment ratio has already started with 100% of which 100% of the activities of the activities has already been completed.

3) Effectiveness of the TTC training:

After returning to their country, one participant and reported about the TTC training outline to about Ministry of education. Also conducted seminar about Motors, mechanism and electrical system to the school teachers. Other one participant explained to the schools staffs about importance of IAT department, and explain about importance about IAT in industry. From this, is expanding and it can be said that the training content conducted at TTC is expanding and was effective.

Consideration:

Because the participants of this course were from Azerbaijan was not good concentrate on the training, collection of impact surveys was not enough successful.

Summary of CFT for TVE Trainers: IAT Intermediate (Pakistan)

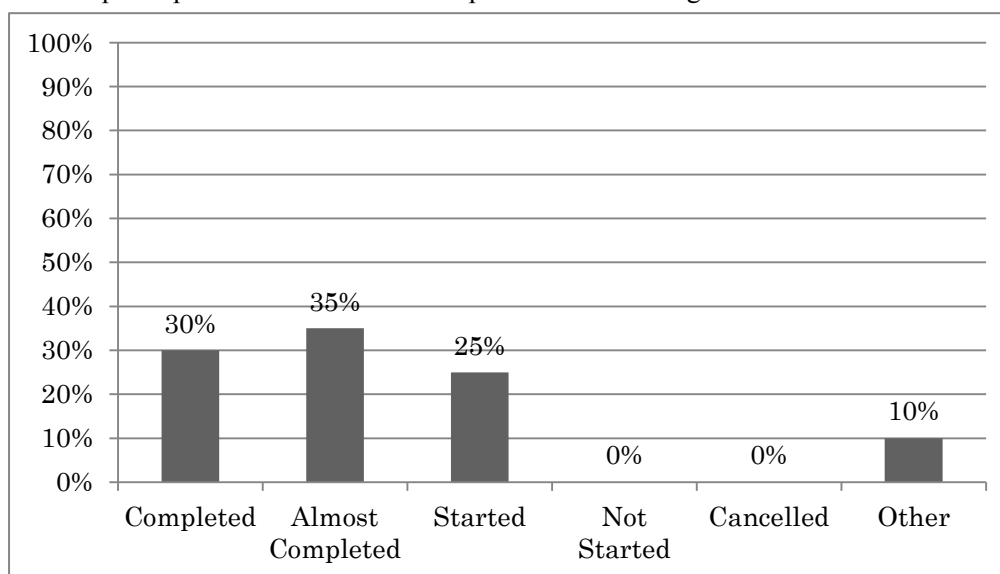
Dec 03,2013-Dec23,2013(3weeks)

1) Number of participants who reply: 5 participants

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Pakistan (10)	10	Pakistan (5)	5	50%

2) Progress of Action plan:

5 of the participants formed a total of 20 plans. The following is the attainment status.



Graph6. Achievement of action plan (N=20)

The attainment ratio has already started with 80% of which 30% of the activities have already been completed. We can conclude that the results were very outstanding results. Furthermore, communication with the lecturers from Turkey using the WBTSS was also very active. A very ideal follow-up of the course is being conducted. The factors for this are probably the Pakistan Trainees' high level towards IAT and that direct communication in English is possible.

3) Effectiveness of the TTC training:

5 participants prepared report to their manager. 3 out of 5 participants transferred their knowledge's that they learned in ttc with colleagues.3 out of 5 participant requested for purchase one PLC for their school, and accepted by authority. One participant started to organize workshop for awareness for TEVTA.

From these, it can be judged that the effect of the TTC Training is expanding and is enough efficient.

Consideration:

The activities of the Pakistan trainees after returning home is proceeding smoothly, and their experience at the

TTC Training is effectively being used. Even in the follow-up after the TTC Training, the WBTSS was actively being used and the form of information exchange was ideal. This was probably influenced by the completely ready environment, the factors I have mentioned above: the high IAT level of the trainees and the ability to communicate directly in English. TTC is planning to increase the skill level of the intermediate and advanced course, and the IAT, and conduct training for countries that have the foundation to absorb skills like these. Especially in Pakistan, which has a high need for the training of teachers, members of the TTC faculty would need to have more advanced instruction capabilities. Depending on the case, TTC faculty may also need to have technical support to improve their skills.

Summary of GT for TVE Trainers: IAT Basic (Palestine)

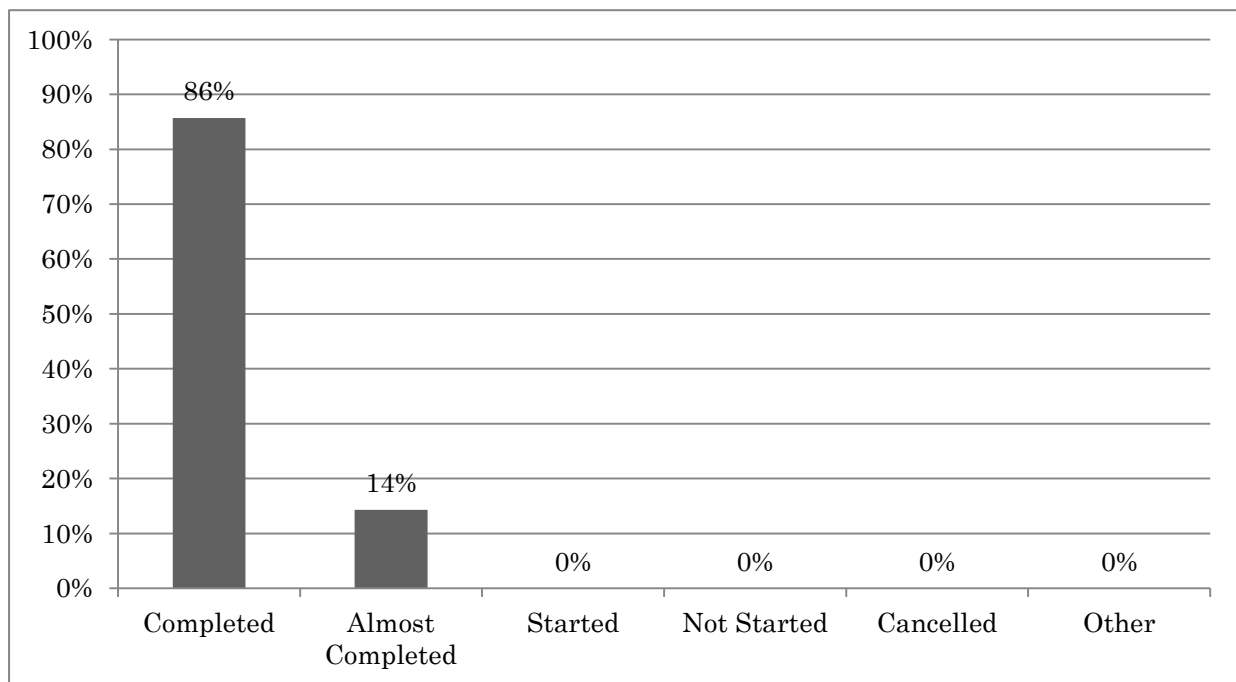
January 6, 2014 – January 31, 2014(4-week)

1) Number of participants who reply: 5 participants

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Palestine (7)	7	Palestine (2)	2	20%

2) Progress of Action plan:

2 of the participants formed a total of 7 plans. The following is the attainment status.



Graph7. Achievement of action plan (N=7)

The attainment ratio has already started with 100% of which 86% of the activities have already been completed. Communication with the lecturers from Turkey using the WBTSS was not very active. Not so ideal follow-up of the course is being conducted.

3) Effectiveness of the TTC training:

1 out of 2 teacher made proposal to develop IAT department in their school and suggested necessary equipment, and conducted technical seminar for teachers and students. 1 out of 2 teacher made lesson about (Pneumatic and PLC). Because of less number of impact survey reply we couldn't measure the effectiveness of training in TTC. According to the received impact surveys 2 participants are used very effectively the training in TTC.

Consideration:

The activities of the Palestine trainees after returning home is cannot enough followed because of few numbers

impact surveys being replied. The other ways to communication with participants should be try for example by TIKA office in Palestine.

Summary of GT for TVE Trainers: IAT Basic (Tajikistan, Kyrgyzstan, Turkmenistan, Uzbekistan)

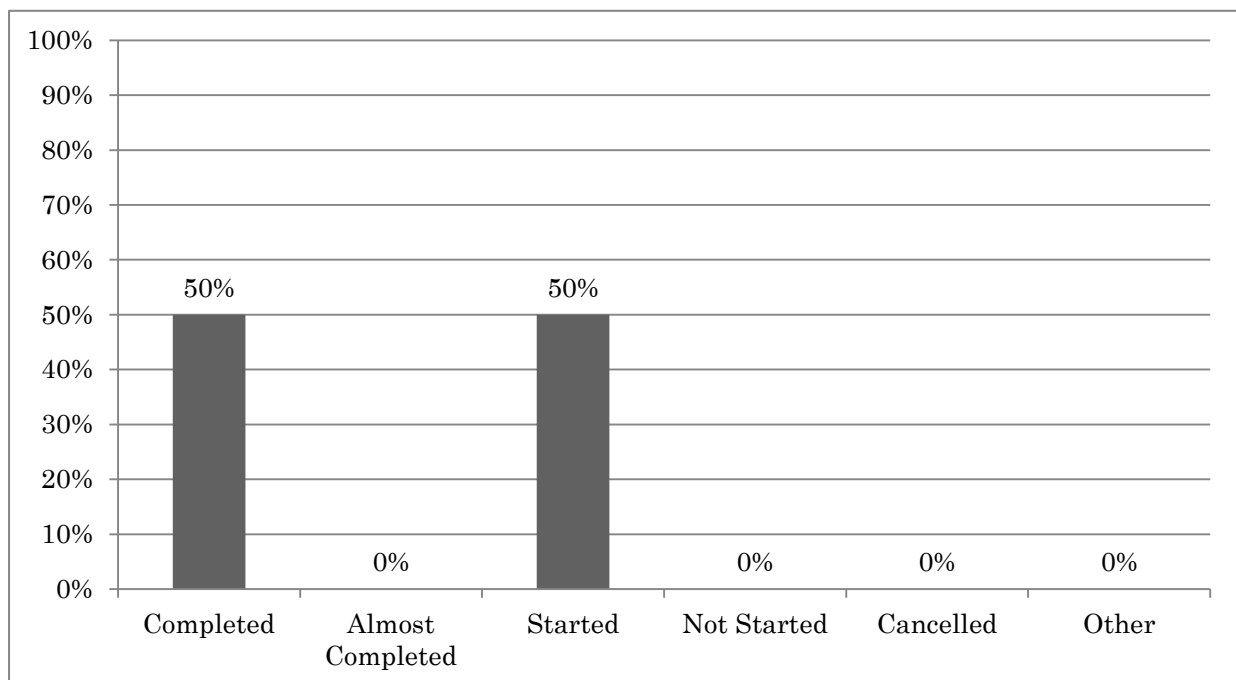
April 14, 2014 – May 9, 2014(4-week)

1) Number of participants who reply: 2 participants

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Kyrgyzstan(5) Tajikistan(3) Turkmenistan(2) Uzbekistan(0)	10	Kyrgyzstan(2) Tajikistan(0) Turkmenistan(0) Uzbekistan(0)	2	20%

2) Progress of Action plan:

2 of the participants formed a total of 4 plans. The following is the attainment status.



Graph8. Achievement of action plan (N=4)

The attainment ratio has already started with 100% of which 50% of the activities have already been completed. Communication with the lecturers from Turkey using the WBTSS was not very active. Not so ideal follow-up of the course is being conducted.

3) Effectiveness of the TTC training:

Only two participants filled the follow up questionnaires. According to the replies one participant conducted short training for employees of “Automatic Control” department and started to prepare theoretical materials (Lectures, tasks and test) for training. Other one participant started to make introductory talk about the contents of training for the manager of Lyceum and started to make preparation for workshop and started to prepare demonstration materials and handouts. Because of less number of impact survey reply we couldn’t measure the effectiveness of training in TTC. According to the received impact surveys 2 participants are used very effectively

the training in TTC.

Consideration:

The activities of the GT trainees after returning home is cannot enough followed because of few numbers impact surveys being replied. The other ways to communication with participants should be trying for example by TIKA office in GT countries. Because the participants of this course were from Russian speaking countries, the Questionnaire collection rate was very low. Also because of this language problem, the support using WBTSS was not very effective and the condition could not be clearly grasped.

Summary of CFT for TVE Trainers: IAT Intermediate (Kazakhstan)

Jun02,2014-Jun20,2014(3weeks)

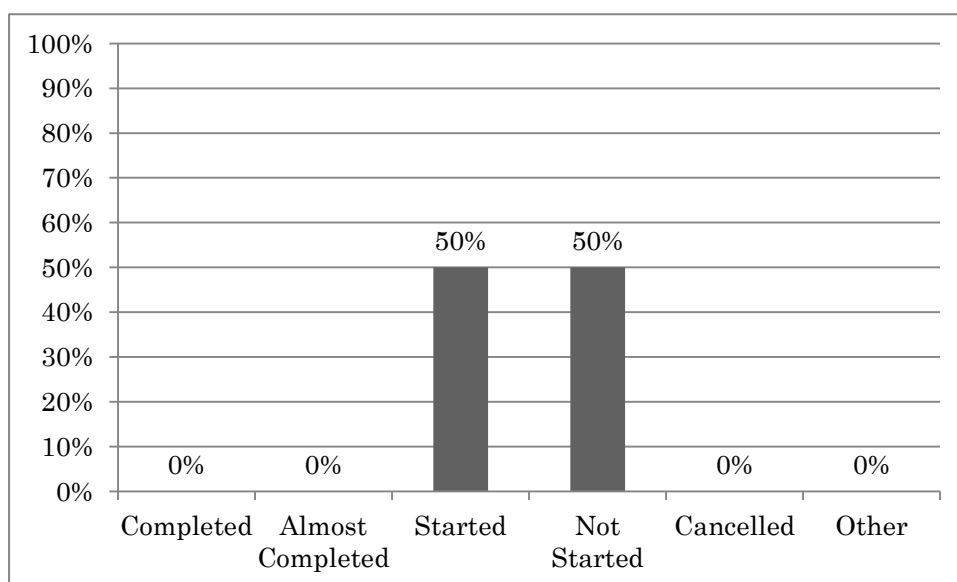
1) Number of participants who reply: 6 participants

Country (No. of Participants)	Total Participated	Each country Reply (No.of reply)	Total no. of Reply Participants	% of Reply
Kazakhstan (12)	12	Kazakhstan (6)	6	50%

At the Kazakhstan Training, a total of 4 schools participated as a group with 3 people from each school. As a result, the Action Plan was not made individually. A total of 6 plans were made, one from each school. Only two schools responded to the Questionnaire.

2) Progress of Action plan:

The participants of 2 school formed a total of 6 plans. The following is the attainment status.



Graph9. Achievement of action plan (N=6)

The attainment ratio has already started with 50% .No activities has been completed.

3) Effectiveness of the TTC training:

After returning to their country, 3 participants from 1 school all cooperated and started to report about the TTC training. Other school group does not start to make their plans. According to the results training effectiveness is not enough.

Consideration:

Because the participants of this course were from Russian speaking countries, the Questionnaire collection rate was very low. Also because of this language problem, the support using WBTSS was not very effective and the condition could not be clearly grasped. However, after that, taking advantage of the commencement of a JICA

related project of similar field in Kazakhstan, a connection could now be made and the situation could somewhat be shared. This fiscal year, TTC faculty members are scheduled to be sent to these schools as a follow-up, and meticulous onsite support is being attained.

Conclusion

Follow-up system is made for to understand the effectiveness of training that given in TTC after participants going back to their countries. Also the other reason if support needed according to the impact survey forms, trying to find the possible solutions. Follow-up system is also helps to make more efficient training for the future groups.

IATE Project two follow-up activities;

1. Impact Survey forms (Sending forms after 3 Months finishing the course)
2. WBTSS (Web Based Training Support System)

Follow-up is perhaps one of the most difficult parts of the especially international projects. The most important difficulty to reach the result is to not have bindings for participant's communication with project center. The other barrier for having not enough result is language.

According to the result of follow-up of IATE Project out of 96 targeted participants, only 40 participants responded and returned questionnaire. The collection rate for entire study was 42%. Out of 125 action, 53% completed and 17% almost completed and 24% started. The most successful results are coming from Pakistan participants.

As a result of follow-up process success rate is medium level.

別添 9

専門家派遣結果

別添 9 専門家派遣結果

Field of Expertise	Name	Dispatched period (M/M)				
		2012	2013	2014	2015	Total
Chief Advisor/Training Management/Curriculum Development 1	Takujiro ITO	5.33	3.20	3.63	1.34	13.50
Curriculum Development 2	Ayako NAKAZATO	3.00	2.00	2.00	0.00	7.00
Industrial Automation Technology	Hideki KUMAGAI	0.00	0.83	0.43	0.00	1.27
Coordinator/Training Management Assistance	Mami FUJISHIMA	3.00	2.16	1.60	0.00	6.76
Coordinator/Training Management Assistance	Gen FUJII				1.07	1.07
Total		11.33	8.19	7.66	2.41	29.6

別添 10

カウンター・パート アサインメント リスト

別添10 カウンター・パート アサインメントリスト

No	Title	Name of Counterpart	Position / Organization	Field in charge	Term of Assignment		Institution
					From	To	
1	Prof. (Mr.)	Ömer AÇIKGÖZ	Director General	Project Director	1st & 2nd Year		MoNE
2	Mr.	Osman YILDIRIM	Acting Director General	Project Director	3rd Year		MoNE
3	Ms.	Şennur ÇETİN	Head of Group	Deputy Project Director	1st-3rd Year		MoNE
4	Mr.	Yücel YÜKSEL	Head of Department	Deputy Project Director	1st & 2nd Year		MoNE
5	Mr.	Yaşar Baki ALTUNBA	Section Director	-	1st & 2nd Year		MoNE
6	Mr.	Mehmet YAZAR	Expert	-	3rd Year		MoNE
7	Mr.	Hamit DOĞAN	Principal	Project Manager	Start of the Project	15.01.2013	MoNE (MZS)
9	Mr.	Hasan KORKMAZ	Principal	Project Manager	15.01.2013	23.6.2014	MoNE (MZS)
10	Mr.	Yusuf VURAL	Principal	Project Manager	23.6.2014	-	MoNE (MZS)
11	Mr.	Murat ÖZDEVECİ	Head of IAT Department / TTC Lecturer	Counterpart	Start of the Project	Sept.2013	MoNE (MZS)
			TTC Lecturer	Counterpart	Sept.2013	End of Project	MoNE (MZS)
12	Mr.	Osman Egemen DÖĞER	TTC Lecturer/Coordinator	Counterpart	28.2.2013	Sept.2013	MoNE (MZS)
			Head of IAT Department / TTC Lecturer	Counterpart	Sept.2013	End of Project	MoNE (MZS)
13	Mr.	Gürcan BILDIR	TTC Lecturer	Counterpart	18.06.2012	Sept.2013	MoNE (MZS)
			TTC Lecturer/Coordinator	Counterpart	Sept.2013	End of Project	MoNE (MZS)
14	Mr.	Bülent VARDAL	TTC Lecturer	Counterpart	18.06.2012	End of Project	MoNE (MZS)
15	Mr.	İsmail AKTAŞ	TTC Lecturer	Counterpart	18.06.2012	End of Project	MoNE (MZS)
16	Mr.	Mustafa NAZMAN	TTC Lecturer	Counterpart	18.06.2012	18.06.2013	MoNE (MZS)
17	Mr.	Telat GÜLER	TTC Lecturer	Counterpart	2012/6/18	18.06.2013	MoNE (MZS)
18	Mr.	Mehmet YILMAZ	Head of Department	Head of Department	1st-3rd Year		TIKA
19	Mr.	Şafak ÖZDEMİR	Expert	Expert	1st Year		TIKA
20	Mr.	Ömer ÖZDENÖREN	Expert	Expert	1st Year		TIKA
21	Ms.	Belgin ÇAĞDAŞ	Expert	Expert	1st Year		TIKA
22	Mr.	Ahmet DAŞTAN	Expert	Expert	2nd Year		TIKA
23	Ms.	Ayşe ÖRÜN	Expert	Expert	3rd Year		TIKA
24	Ms.	Berna GÜRKAŞ	Expert	Expert	3rd Year		TIKA

別添 11

JCC 議事録（第 1 回～第 8 回）

**MINUTES OF MEETING
OF
THE FIRST JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY(IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES IN THE REPUBLIC OF TURKEY**

Agreed upon between

Ministry of National Education,

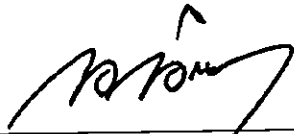
Turkish Cooperation and Coordination Agency

and

Japan International Cooperation Agency

Ankara

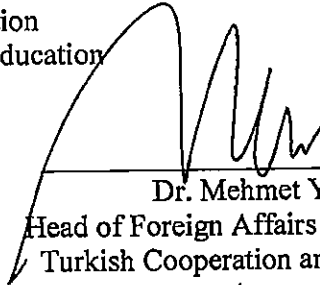
12th April 2012



Mr. Yücel Yüksel
Head of Department,
General Directorate of Vocational and
Technical Education
Ministry of National Education



Dr. Takujiro Ito
Chief Advisor,
JICA Expert Team
IAT Extension Project



Dr. Mehmet Yılmaz
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

The First Joint Coordinating Committee (hereinafter referred to as the "JCC") Meeting on the Project for the Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey (hereinafter referred to as "the Project") was held on April 12, 2012, at the Sheraton Ankara Hotel, Convention Center to confirm the framework of the project stated in the Record of the discussion (hereinafter referred to as R/D) signed on 28 November 2011 by MONE, TIKA and JICA, and decided the draft plan of operation (hereinafter referred as PO) for the first year of the project.

JCC members (refer to Annex 1) attended the meeting. The Ministry of National Education (hereinafter referred as "MONE"), Turkish Cooperation and Coordination Agency (hereinafter referred as "TIKA") and the Japanese expert team followed the agenda of the meeting (refer to Annex 2), the results of which are summarized as follows.

1. An opening statement and introduction of the Project was delivered by Mr. Yücel Yüksel, Head of Department of MoNE on behalf of Assoc. Prof. Dr. Omer Acikgoz, Director General of MoNE. Following, Mr. Mehmet Yilmaz, Head of Foreign Affairs and Partnerships Department of TIKA and Mr. Akio Saito, Chief Representative of JICA Turkey Office made opening remarks.
2. A brief self-introduction of the participants was done in order to know each other.
3. The Project Design Matrix (hereafter referred as PDM), Plan of Operation (hereinafter referred as the "PO") and Implementation Structure of the project was confirmed following the explanation of the mentioned documents from the R/D by Mr. Yücel Yüksel. Mr. Yosuke Nishii added the explanation of the logic of the PDM.
4. Dr. Takujiro Ito, Chief Advisor of the Project, explained draft ideas for PO ver.1 (refer to Annex 4 and 6) to other JCC members. He proposed the following three activities to be modified from the original plan: 1) Parallel implementation of the two Country Focused Training courses, 2) Administrative program for the 1st year of the Group Training courses, and 3) Three special events: Need Analysis and Human Resource Development Seminar in the field of IAT to be implemented in November 2012, Instructional Design Workshop to be

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implemented in October 2012, and Seminar for effective operation of the web-based follow up system to be implemented in October 2012. JCC members discussed the followings issues and agreed on the proposed PO ver.1.

a) Identification of the need of the target countries:

- Local consultants have conducted a study survey to find out the needs and the situation of target countries upon planning the Project. In addition, need survey will be conducted to find out detail needs of the four target countries for Country Focused Training.
- Dr. Takujiro Ito explained an idea for the implementation of the Country Focused Training within 3-year period of training, starting from the basic contents of the IAT to more technical content, simultaneously with the local official procedure for the introduction of the IAT into the vocational high school curriculum of the target countries.
- Dr. Recep Altın suggested the idea of implementing the training in the same approach taken in previous phases of the Project, which were successful. However, Mr. Mehmet Yilmaz mentioned the difficulties of extending the Turkish model of the IAT to the target countries, and pointed out the Project will be the chance to introduce the IAT to target countries through the trainees attending the course in Turkey.
- JCC members agreed that the training must be carried out based on their needs identified in the results of the need survey.

b) Reporting of the Project

- JCC members agreed on to Progress Reports to monitor the achievement and progress of the activities. Reporting and Monitoring will be done by all the implementing organizations, including MoNE, TIKKA and JICA.
- All the reports, Minutes of the Meeting, and materials developed will be presented in JCC.
- The format and the contents of the reports will be discussed during the implementation.

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- The impact of the project will be assessed at the end of the project, which will be conducted jointly by MoNE, TIKA and JICA.
5. Draft Work Plan for year 2012: Dr. Takujiro Ito presented the draft of Work Plan for year 2012 (refer to Annex 6), which the final version will be approved in next JCC meeting. During his presentation, he emphasized the draft schedule for the implementation of JCC during the project as follows:

JCC	Schedule	Venue
1 st JCC	April 2012	Ankara
2 nd JCC	October 2012	Izmir
3 rd JCC	April 2013	Ankara
4 th JCC	September 2013	Izmir
5 th JCC	June 2014	Ankara
6 th JCC	December 2014	Izmir

He also explained the draft schedule of the need survey for Country Focused Training as below, and requested the necessary support for the implementation by MoNE and TIKA.

May 6-12, Pakistan

May 14-19, Uzbekistan

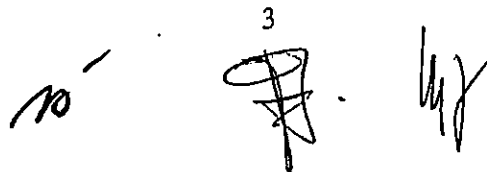
May 20-25, Kazakhstan

June 3-9, Azerbaijan

6. JCC members agreed on the draft Work Plan for year 2012 including the schedule for the JCC and needs survey. Mr. Hamit Doğan will host the 2nd JCC Meeting in Izmir during October 2012. JCC members agreed that this shouldn't be overlapping with other activities including the 3rd country training on sustainable agriculture, which will take place in October.
7. Mr. Yücel Yüksel concluded the first JCC, confirming that all program of the JCC was completed and approved by the JCC members.

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Attendance List for 1st JCC Meeting

JCC members, Turkish side

No.	Name	Position	Institution
1	Mr. Yücel Yüksel	Head of Department	GD of Vocational and Technical Education, MoNE
2	Mr. Yaşar Bakı Altunbaş	Section Director	GD of Vocational and Technical Education, MoNE
3	Mr. Hamit Doğan	School Principal	Mazhar Zorlu Vocational and Technical High School
4	Mr. Murat Özdeveci	Chief of IAT Department	Mazhar Zorlu Vocational and Technical High School
5	Mr. Gürcan Bıldır	Chief of Laboratory of IAT Department	Mazhar Zorlu Vocational and Technical High School
6	Mr. Ahmet Yücel	Section Director	GD of Human Resource, MoNE
8	Dr. Recep Altın	Expert	GD of EU and Foreign Affairs
7	Dr. Mehmet Yılmaz	Head of Foreign Affairs and Partnerships Department	Turkish Cooperation and Coordination Agency
9	Ms. Ayşe Örtün	Expert	Turkish Cooperation and Coordination Agency
10	Ms. Ayşe Özcan	Expert	Turkish Cooperation and Coordination Agency

JCC members, Japanese Side

No.	Name	Position	Institution
1	Mr. Akio SAITO	Chief Representative	JICA Turkey Office
2	Mr. Yosuke NISHII	Representative	JICA Turkey Office
3	Dr. Emin OZDAMAR	Senior Program Officer	JICA Turkey Office
4	Dr. Takujiro ITO	Chief Advisor / Training Management / Curriculum Development 1	JICA
5	Ms. Mami FUJISHIMA	Coordinator / Training Management Assistance	JICA

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The Industrial Automation Technology Extension Project
For Central Asian and Middle East Countries
The First Joint Coordinating Committee Meeting

Agenda of the 1st JCC Meeting

Date: April 12, 2012

Time: 15:00 – 17:30

Place: Magnolia II (1st floor of the Sheraton Convention Center)

Chairperson: Assoc. Prof. Dr. Ömer AÇIKGÖZ, Director General

Program:

1. Introduction of JCC:

-Mr. YÜKSEL, Head, Ministry of National Education (5 min.)

2. Welcome and Opening Remarks:

-Mr. Mehmet YILMAZ, Head of Foreign Affairs and Partnerships Department,
Turkish Cooperation and Coordination Agency (10 min.)

3. Opening Speech:

-Mr. Akio SAITO, Chief Representative, JICA Turkey Office (10 min.)

-Assoc. Prof. Dr. Ömer AÇIKGÖZ, Director General, Ministry of National Education
(10 min.)

4. Presentation of the participants (10 min.)

5. Discussion Topics (total 105 min.)

(1). Session 1: Confirmation of the PDM and Implementation Structure described in
the R/D (15 min.)

(2). Tea breaks (15 min.)

(3). Session 2: Overview schedule and activities of the entire Project (30 min.)

(4). Session 3: Discussion on the draft Work Plan of the first year of the Project
(45 min.)

6. Closing

- Following the JCC, a dinner reception at Magnolia I (Sheraton Ankara Hotel & Convention Center) is prepared by the project team.

no *Ömer AÇIKGÖZ* - *Mr. YÜKSEL*



**ENDÜSTRİYEL OTOMASYON TEKNOLOJİLERİNİN
ORTA ASYA VE ORTA DOĞU ÜLKELERİNE
YAYGINLAŞTIRILMASI PROJESİ**

12 NİSAN 2012

SUNU İÇERİĞİ

- Uluslar arası işbirliğinde proje çalışmaları,
- EOT Projesi,
- SPREAD Projesi,
- Öğretmen Eğitim Merkezi,
- Sektörle işbirliği çalışmaları,
- Azerbaycanlı öğretmenlerin Eğitimi,
- Türk Cumhuriyetlerine verilecek eğitim.

Almanya, Fransa ve Japonya gibi ülkelerle işbirliği kapsamında proje çalışmaları yapılmıştır.

Bu çalışmalar kapsamında öğretmenler yurt içinde ve yurt dışında mesleki eğitim almışlar, yeni teknolojiye göre öğretim programları güncellenmiştir.

2001 – 2006 yılları arasında Japonya Uluslar arası İşbirliği Ajansı (JICA) ile "Anadolu Teknik Liselerinde Endüstriyel Otomasyon Teknolojileri Bölümü Kurulması Projesi" İzmir ve Konya'da iki okulumuzda pilot proje olarak uygulanmıştır.

Annex 2

Endüstriyel Otomasyon Teknolojileri Alanı; elektrik-elektronik, bilgisayar ve makine teknolojisi bilgilerinin öğretildiği bir alandır.

Bu alandan mezun olanlar teknisyen unvanıyla işletmelerde işe başlarlar. Fabrika otomasyon sistemlerinin bakım, tamir, yeniden tasarım ve programlama işlerini yapabilirler.



Proje kapsamında bulunan iki okulda görev yapan 25 teknik öğretmen önce okullarında Japon uzmanlardan eğitim almışlar, daha sonra da Japonya'daki kolej, üniversite ve /veya işletmelerde 6-9 ay arasında değişen sürede mesleki eğitim almışlardır.

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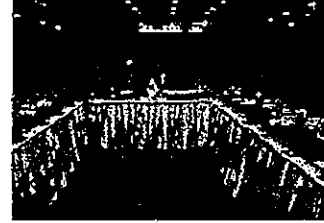


Proje okullarımızın atölye ve laboratuvarlarında sanayide çalışan usta, teknisyen ve mühendislere otomasyon teknolojileri ile ilgili eğitimler verilmektedir.

MEB - MİTAKA

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Bu alan mezunlarının sanayide talep edilmesi üzerine Türkiye'de 20 okulda daha yaygınlaştırılmıştır.



MEB - MİTAKA

5



Yaygınlaştırma okullarında görev yapan öğretmenlerin hizmetçi eğitim yoluyla yetiştirilmesi amacıyla İzmir Mazhar Zorlu Teknik Lise ve Endüstri Meslek Lisesinde Öğretmen Eğitim Merkezi kurulmuştur.

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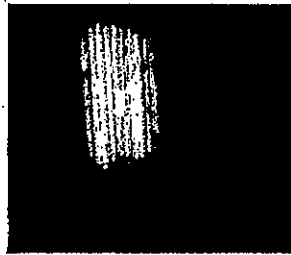
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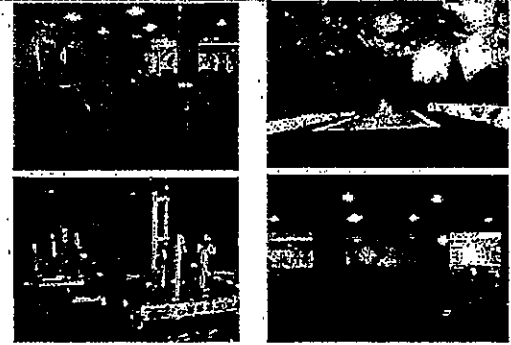
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- Öğretmen Eğitim Merkezinde,
- > 30 oda (her bir odada 2 kişi kalabilir)
 - > 100 kişilik konferans salonu,
 - > dinlenme odası,
 - > kafeterya, yemekhane,
 - > bilgisayar internet odası,
 - > değişik amaçlı 5 laboratuvar,
 - > akıllı sınıf bulunmaktadır.



MEB - MİTAKA

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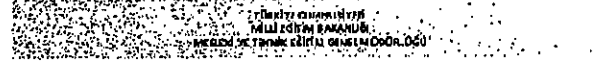
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etmek istiyoruz.
Bu amaçla 2007 yılında Azerbaycan daki öğretmenlere yönelik bir proje hazırlanmış ve bu proje TİKA tarafından desteklenmiştir. 3 yılda 30 öğretmen eğitim almıştır

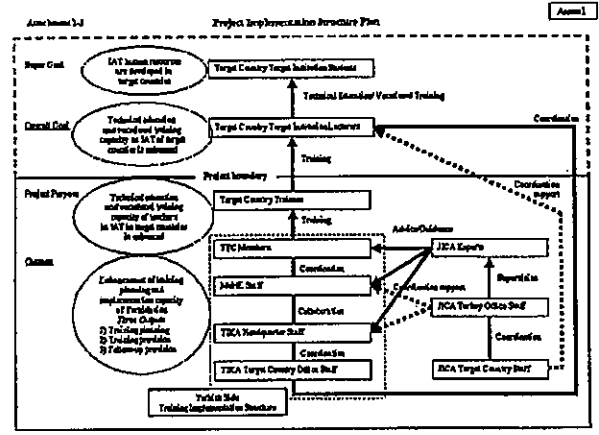


Endüstriyel Otomasyon Teknolojilerinin Orta Asya ve Orta Doğu Ülkelerine Yaygınlaştırılması Projesi'nin amacı;

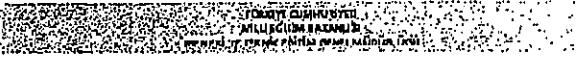
hedef ülkelerde endüstriyel otomasyon alanında görev yapan öğretmenlerin mesleki ve teknik eğitim kapasitesini güçlendirmektir.



28 Kasım 2011 tarihinde MEB-JICA-TİKA tarafından imzalanan "Orta Asya ve Orta Doğu Ülkelerinde endüstriyel Otomasyon Teknolojileri Yaygınlaştırma Projesi" uygulama protokolü gereğince Nisan 2012 tarihinde uygulamaya başlayarak üç yıl sürecek olan Proje kapsamında 9 ülke bulunmaktadır.



-  Azerbaijan
-  Pakistan
-  Özbekistan
-  Kazakistan
-  Kırgızistan
-  Türkmenistan
-  Tacikistan
-  Afganistan
-  Filistin



- Pakistan
- Özbekistan
- Azerbaycan

Kazakistan ülkelerinin ihtiyaçları farklı olduğundan bu ülkelerden gelecek öğretmenlere uygulanacak programlar farklı olacaktır.

Bu ülkelerden her yıl 10 öğretmene 3 hafta süre ile ülkeye özgü eğitim verilecektir.

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Kırgızistan
Türkmenistan
Tacikistan
Afganistan

Filistin ülkelerinin ihtiyaçları temel seviyede olduğundan grup eğitimi verilecektir.
Her ülkeden 2 öğretmenin katılacağı Grup Eğitimleri yılda 2 kez 4'er hafta olarak gerçekleştirilecektir.

Proje kapsamında;
Her yıl ülkeye özgü eğitimlere 40, grup eğitimlerine de 20 olmak üzere toplam 60 öğretmene eğitim verilecektir.

Proposed Training Implementation Plan

Country Focused Target	Countries (Pakistan, Uzbekistan, Kazakhstan, Azerbaijan)	Course Focused Training	4 Courses (Separate course for each country)	10 participants X 4 Courses = 40 participants	3 weeks
Group Target	5 Countries (Afghanistan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan)	Group Training	2 Courses	2 Participants X 5 Countries X 2 Course = 20 Participants	4 weeks

YÜCEL YÜKSEL
Millî Eğitim Bakanlığı
Mesleki ve Teknik Eğitim Genel Müdürlüğü
Daire Başkanı

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R - Mj

Plan of Operation Ver. 1 (Draft)

Activity	2017												2018												
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
[Output 1] Training for the target group is appropriately planned.																									
1-1 Set the appropriate training targets for the training.																									
1-2 Analyze situation and needs of the target countries.																									
1-3 Dispatch needs survey mission to the target country-focused training countries.																									
1-4 Select target institution(s) in each target country.																									
1-5 Establish specific project targets for each country.																									
1-6 Develop/ Improve training curriculum.																									
1-7 Prepare/ Improve training material.																									
1-8 Conduct Instruction Design Workshop.																									
1-9 Determine training schedule.																									
1-10 Develop and distribute GI (General Information) to target countries.																									
[Output 2] Training for the target group is effectively provided.	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
2-1 Select participants in each country.																									
2-1-1 Select participants for the country-focused training.																									
2-1-2 Select participants for the group training.																									
2-2 Arrange logistics.																									
2-3 Implement training.																									
2-3-1 Implement training for Azerbaijan.																									
2-3-2 Implement training for Kazakhstan.																									
2-3-3 Implement training for Pakistan.																									
2-3-4 Implement training for Uzbekistan.																									
2-3-5 Implement group training.																									
2-4 Conduct need analysis and human resource development seminar for group training countries.																									
2-5 Evaluate contents of the training																									
[Output 3] Follow-up system is established.	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
3-1 Develop follow-up plan for trained participants in each country.																									
3-2-1 Develop web-based information sharing system.																									
3-2-2 Implement the seminar for effective operation of the web system.																									
3-3 Conduct follow-up based on the plan.																									
3-4 Evaluate the impact of the training.																									
[Management activities]	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
(1) Hold Joint Coordination Committee (JCC) meetings.																									
(3) Develop implementation plans.																									
(2) Finalize the Objectively Verifiable Indicators and confirm on the PDM.																									
(4) Develop and get the approval of the Work Plan.																									
(5) Support the conclusion of the Minutes of Meeting (M/M) on training contents.																									
(6) Develop the project progress report.																									
(7) Support terminal evolution of the project.																									
(8) Develop project completion report.																									
Expert Assignment Schedule	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
Chief Advisor/ Training Management/ Curriculum Development 1																									
Curriculum Development 2																									
Coordinator/ Training Management Assistance																									

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Ministry of National Education
(MoNE)



Turkish Cooperation and
Coordination Agency
(TIKA)



Japan International
Cooperation Agency
(JICA)

Technical Cooperation Project

**The Industrial Automation Technology (IAT)
Extension Project for Central Asian and Middle
East Countries in the Republic of Turkey**

Work Plan for the First Year of the Project

(Draft)

**April 2012
Ankara - Turkey**

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1. General Information about the Project

1.1 Background of This Project

Government of Turkey (hereinafter referred to as "GoT") has been focusing on implementing policy measures to strengthen its global competitiveness of manufacturing industries, and to introduce advanced technology and promote capital intensive industries for the purpose of enabling the delivery of high valued products and services since the 1990s. GoT has prioritized the improvement and strengthening the supply and labour market with capable technicians and skilled human resources.

In this context, the project on "Establishment of Industrial Automation Technologies by the General Directorate of Vocational and Technical High Schools" was successfully carried out jointly by the General Directorate of Vocational and Technical Education (hereinafter referred to as "GDVTE") of Ministry of National Education (hereinafter referred to as "MoNE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") between 2001 and 2006 with the aim of establishing industrial automation technology (IAT) departments at international standards in Izmir Mazhar Zorlu and Konya Adil Karaagac Anatolian Technical High Schools, and training the teachers of these departments in Japan and developing the training and education programs for IAT.

Following the successful implementation of the above-mentioned project, which produced outputs in line with the sectoral demands, it was planned in 2005 to newly establish IAT departments in 20 schools. The Teacher Training Centre (hereinafter referred to as "TTC") was established at Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School in 2006 with the aim of developing the teaching staff who will work at the IAT departments of the 20 schools.

In 2007, GDVTE of MoNE and JICA commenced "The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department" (SPREAD). This project established the Teacher Training System within TTC, and teachers and staff at TTC were trained.

Following those successful initiatives, GoT and Japan decided to transfer the knowledge and experiences acquired through the above-mentioned projects to vocational and technical teachers of the countries in Central Asia and Middle East Region by means of training to be provided at TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School. On November 28, 2011, the Record of Discussion was signed between MoNE, JICA and Turkish Cooperation and Coordination Agency (hereinafter referred to as "TIKA") for setting the framework for the project implementation.

1.2 Framework of the Project

The basic project framework, based on the R/D exchanged in November 2011, is shown below.

(1) Super Goal/ Overall Goal

Super Goal: IAT human resources are developed in target countries.

Overall Goal: Technical education and vocational training capacity on IAT of target group is enhanced.

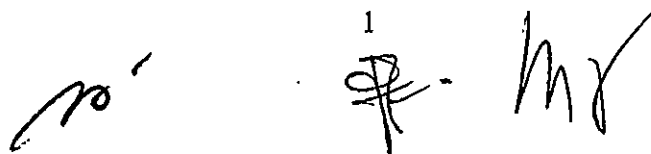
(2) Project Purpose

Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.

(3) Project Outputs

Output 1: Training for target group is appropriately planned.

Output 2: Training for target group is effectively provided.



Output 3: Follow-up system is established.

(4) Project Site

The project site will be TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School.

(5) Target Countries

Azerbaijan, Kazakhstan, Pakistan, Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan (Total of 9 countries)

(6) Relevant Government Agencies and Organizations

GDVTE of the MoNE will be the counterpart to JICA. However, in the practical manner, JICA experts will work together with counterparts in TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School. TIKA, the collaborating agency, will provide the necessary support.

(7) Beneficiaries

Direct beneficiaries: Teachers teaching IAT and related subjects in technical and vocational schools in target countries.

Indirect beneficiaries: Students in technical and vocational schools in target countries.

2. Implementation Structure

2.1 Key players and Implementation Structure

The Project Implementation Structure is shown below. TTC will be the main player of the implementation of the project, coordinating with MoNE, which is the superior division. MoNE will be collaborating with TIKA. Activities such as needs survey, recruitment of participants, follow-up of the trained participants would be carried out with the help of TIKA Program Coordination Offices in the target countries.

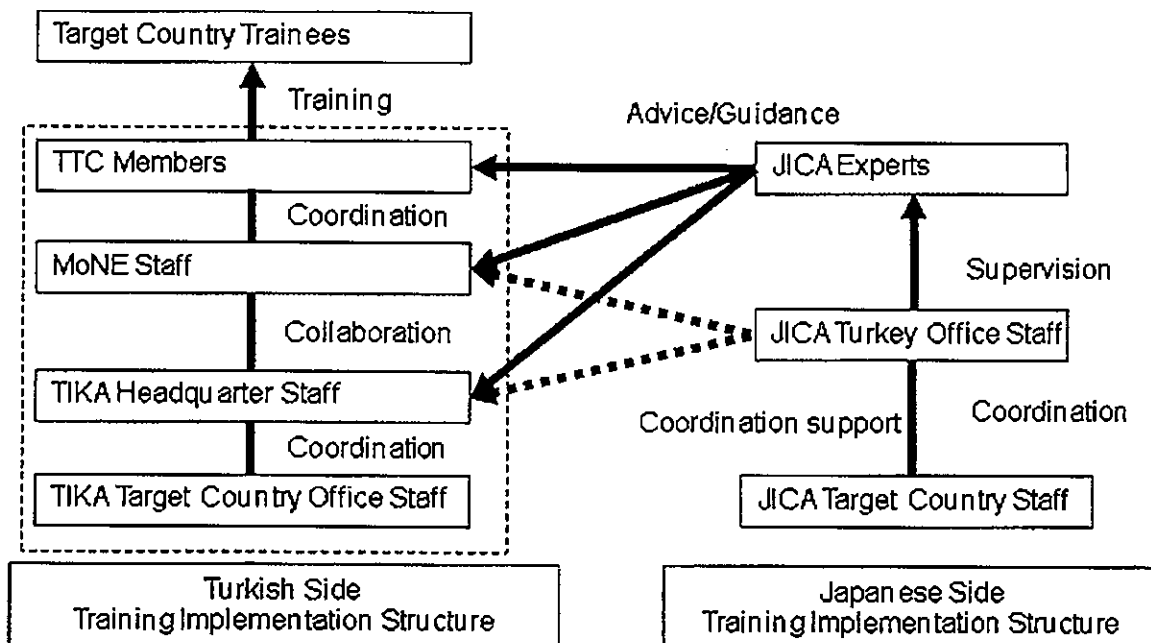


Figure 1. Implementation Structure

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The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries
Work Plan for the First Year of the Project (Draft)

JICA experts, under the supervision of the JICA Turkey Office, would provide advice or guidance for the implementation of the international training to TTC members, MoNE staff and also to TIKA Headquarter staff. JICA Turkey Office would coordinate and support both MoNE and TIKA. If necessary, JICA Turkey Office will coordinate with JICA offices in target countries.

Detailed roles and responsibilities of each organization agreed on R/D are shown below.

Table 1 Detailed Roles and Responsibilities

Organization	Roles and Responsibilities	Inputs
Izmir Mazhar Zorlu School Teacher Training Center	<ul style="list-style-type: none"> -Develop implementation plan of the Trainings within the project framework. -Lead the implementation of the Trainings <ul style="list-style-type: none"> ❖ Analyses of target, curricula, training contents, materials, etc. ❖ Development of course contents and materials. ❖ Organization of logistical arrangements. ❖ Provision of lectures and site visits. ❖ Compilation of implementation reports. ❖ Implementation of monitoring of the ex-participants' activities. ❖ Provision of follow-up support to the ex-participants. ❖ Conducting initial selection of training candidates. 	<ul style="list-style-type: none"> -Principal of Izmir Mazhar Zorlu Anatolian Technical and industrial Vocational High School to be the "Project Manager" who will bear administrative and technical responsibility for the implementation of the Project. -Services of counterpart personnel and administrative personnel. -Lecturers / instructors for the training. -Suitable office space for JICA Experts with necessary equipment. -Supply and/or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary owned by Turkish side. -Utility and other basic expenses to run the Project. -Available data and information related to the Project. -Information as well as support in obtaining medical service for the JICA Experts.
Ministry of National Education	<ul style="list-style-type: none"> -Take overall responsibility of the management and implementation of the Project. -Overall coordination among all stakeholders. -Coordinate with relevant Turkish Embassies in the target countries whenever the necessity arises. -Supervise the selection process of candidates for training and confirm the selection. 	<ul style="list-style-type: none"> -Director General of General Directorate of Vocational and Technical Education to be the "Project Director" who will bear overall responsibility of the Project. -Head of Department of General Directorate of Vocational and Technical Education to be the "Deputy Project Director" who will bear responsibility of the management of the Project. -Services of counterpart personnel. -Allocation of running experiences within MoNE, necessary for the Project. -Budget for Training Implementation Expenses. (Meeting Expenses, Document Printing, Other Expenses, etc.)
TIKA Headquarters	<ul style="list-style-type: none"> -Coordination with MoNE, TTC, JICA and TIKA Program Coordination Offices.(PCOs) -Support the implementation of the Trainings. <ul style="list-style-type: none"> ❖ Developing GI ❖ Compiling and providing country information to TTC. ❖ Provision of feedbacks to TTC according to gathered information from TIKA PCOs regarding general information of Target countries. ❖ Coordinate and support logistical arrangement for selection procedures of candidates. ❖ Participate in selection of candidate. ❖ Supporting the agreed portion of logistical arrangements. 	<ul style="list-style-type: none"> -Budget for Training Implementation Expenses. (Translation, Excursion Expenses, Expendable Supplies, Consumption Material, etc.) -Expenses of Turkish members to participate in joint needs survey mission to country focused training target countries.
TIKA PCOs in Target Countries	<ul style="list-style-type: none"> -Coordinate with the target countries for the implementation of the Trainings. <ul style="list-style-type: none"> ❖ Coordination with the target organizations for proper selection of nominees. ❖ Distribution of GI and gathering of application forms. ❖ Notifying the selection results to the respective governments. ❖ Provide support to the participants for departure and giving orientation. 	

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The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries
Work Plan for the First Year of the Project (Draft)

	<ul style="list-style-type: none"> ✧ Gather general information of country situation, feedbacks from participants, and potential training needs of the Target countries. ✧ Become focal point for the follow-up activities toward the ex-participants. 	
JICA Experts	<p>Provide overall support to the project through the facilitation and technical advice to MoNE, TTC and TIKA.</p> <p>Support the implantation of the Trainings by giving technical lectures in the agreed field.</p> <p>Participate in selection of candidates for trainings.</p>	
JICA Turkey Office	<p>Coordinate with MoNE, TTC, TIKA, JICA Experts and JICA Offices</p>	<ul style="list-style-type: none"> -Dispatch of the Experts (Chief Advisor/ Training Management/ Curriculum Development 1, Curriculum Development 2, Coordinator/ Assistant Training Management). -Budget for Training Invitation Expenses (Air Fare, Transportation, Perdiem, Accommodation, Health Insurance, etc.) -Expenses of JICA Experts to participate in joint needs survey mission to target countries of country focused training.
JICA Offices in Target Countries	<p>Support coordination with target countries whenever necessary.</p>	

2.2 Implementation Team

(1) Turkish C/P team

The Turkish C/P team is organized by MoNE and TIKA as follows.

Table 2 Members of the Turkish C/P team

Organization	Name	Title in Organization	Title in Project
MoNE	Assoc. Prof. Dr. Ömer AÇIKGÖZ	Director General	Project Director
MoNE	Ms. Şennur ÇETİN	Head of Group	
MoNE	Mr. Yücel YÜKSEL	Head of Department	Deputy Project Director
MoNE	Mr. Yaşar Baki ALTUNBAŞ	Section Director	
MoNE	Mr. Hamit DOĞAN	M.Z. School Principle	Project Manager
MoNE	Mr. Göksel BAYKUŞ	M.Z. School Deputy Principle	
MoNE	Mr. Murat ÖZDEVECİ	Chief of IAT Department	Counterpart
MoNE	Mr. Gürcan BILDİR	Chief of Lab. of IAT Department	Counterpart
MoNE	Mr. Mustafa NAZMAN	Teacher of M.Z. School	Counterpart
MoNE	Mr. Bülent VARDAL	Teacher of M.Z. School	Counterpart
MoNE	Mr. Telat GÜLER	Teacher of M.Z. School	Counterpart
TIKA	Mr. Mehmet YILMAZ	Head of Department	
TIKA	Mr. Şafak ÖZDEMİR	Expert	
TIKA	Mr. Ömer ÖZDENÖREN	Expert	
TIKA	Ms. Belgin ÇAĞDAŞ	Expert	

(2) Japanese Experts and their duties

JICA will assign 3 experts to provide technical support for the implementation of the project. The primary duties of the experts in charge of this project are shown below.



Table 3 Duties of each expert

Name	Position	Duties
Dr. Takujiro Ito	Chief Advisor/ Training Management/ Curriculum Development 1	<ul style="list-style-type: none"> • Support the planning, implementation, and management of the project as a whole • Information sharing, communication, coordination with Turkish side • Supporting development of the training plan and curriculum • Supporting implementation of the training and seminars • Preparation of the reports for JICA
Ms. Ayako Nakazato	Curriculum Development 2	<ul style="list-style-type: none"> • Supporting the development of the training materials • Supporting the development of the follow-up system
Ms. Mami Fujishima	Coordinator/ Training Management Assistance	<ul style="list-style-type: none"> • Assisting project management • Financial administration • Coordination between JICA and other related organizations • Supporting implementation of the training and seminar

3. Activities for the first year of the Project

Activities for first year of this project will be implemented as described below.

3.1 Develop 1st year implementation plan.

Based on the agreement with JICA, 1st year implementation plan (Japanese version of the work plan draft) will be developed and submitted to JICA Turkey Office.

3.2 Develop and get the approval of the 1st year work plan.

Past reports are carefully studied and fundamental policies related to implementation of operations, task objectives and details, and implementation structures will be summarized in the 1st year work plan draft. Through consulting with the relevant Turkish organizations about the content of the plan, share whole picture of the project.

3.3 Hold 1st Joint Coordination Committee (JCC) Meeting.

With the help of the project manager of the counterparts, first JCC meeting will be held in April. At the meeting, overall activities of the 3-year project, 1st year work plan draft, contents of the training (draft) will be discussed and agreed in the minutes of the meeting (M/M).

JCC will be consisted of following members: Director General (Project Director) and related staff of General Directorate of Technical and Vocational Education, MoNE; related staff of Turkish Cooperation and Coordination Agency, TTKA; School Principle (Project Manager) and related staff of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School, TTC; related staff of JICA Turkey Office; and JICA Experts. JCC will approve the annual draft work plan, review overall progress, conduct monitoring and evaluation of the implementation of the project. A tentative schedule and venue of the JCC is shown in the Table 4.

Table 4 Tentative JCC Schedule

JCC	Schedule	Venue (City)	Main Topics
1 st JCC	April 2012	Ankara	<ul style="list-style-type: none"> -Confirmation of the PDM -Confirmation on the roles of each JCC member

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The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries
Work Plan for the First Year of the Project (Draft)

			-Agreement on work plan draft
2 nd JCC	October 2012	Izmir	-Confirmation on the progress of the first half of year 1 -Reporting on the results of Need Survey -Approval of the training schedule
3 rd JCC	April 2013	Ankara	-Reporting on the result of activities in year 1 - Approval of the activity plan of year 2
4 th JCC	September 2013	Izmir	-Confirmation on the progress of the first half of year 2 - Approval of the activities of the second half
5 th JCC	June 2014	Ankara	-Reporting on the result of activities in year 2 - Approval of the activity plan of year 3
6 th JCC	December 2014	Izmir	-Confirmation on the results of 3-year activities -Reporting on the challenges and lessons learned

3.4 Analyze situation and needs of the target countries.

Economic situation, industrialization level, technical education and vocational training system, and details of technical needs of the target countries are the things to be considered for planning the training. Analyze and clarify those topics. If necessary, revise the strategies of training implementation. If there are needs for changes of training implementation structure, consult with JICA Turkey Office and relevant members of the project.

For the analysis of the topic mentioned above, we will utilize existing materials to a maximum extent, including the report, the Study Survey for the Industrial Automation Technology Extension Project for Central Asian and Middle East Countries. The report was written by a Turkish local consultant during the planning of this project. If additional information is required, collect that information through TIKA offices in the target countries.

3.5 Dispatch Needs Survey Mission to the target country focused training countries.

Dispatch joint needs survey mission to four target countries of the country focused training. The mission consists of MoNE, TTC, TIKA and JICA Expert. It will visit government offices and target organizations to collect crucial information for planning the training. Information such as current situation of the industry, government policies, capacity, implementation structure, specific needs, personnel structure and infrastructures of the organizations. According to the result of the survey, revise the training implementation strategies and develop a detail implementation plan. During the survey, the mission will also collect necessary information for the development of the follow-up plan.

Travel expenses of joint needs survey mission for Turkish side will be covered by TIKA. They will also be in charge of the necessary logistic activities for the mission. The Japanese Expert will provide enough support to organize the survey mission and the survey topic before the departure.

Tentative Schedule for Needs Survey Mission to the Country Focused Training:

- May 6-12, Pakistan
- May 14-19, Uzbekistan
- May 20-25 Kazakhstan
- June 3-9, Azerbaijan

Table 5 Summary of the Needs Survey for the Country Focused Training

Purpose	1) Collect information of the situations related to the IAT training in the target countries 2) Select target organizations and get agreement on the training purpose, contents, schedule of the 3-year training.
Target Countries	Azerbaijan, Kazakhstan, Uzbekistan, Pakistan
Survey Topics	- Detail information of the target countries for planning the training (current situation of the industry,

The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries
Work Plan for the First Year of the Project (Draft)

	government policies, capacity, implementation structure, specific needs, personnel structure, infrastructures of the organizations) - Necessary information for developing follow-up system. - Agreement on the selection of the target organizations and training implementation.
Target	Ministry of National Education, proposed target organizations (vocational training schools), industry-related government agencies, companies of related fields, local Turkish embassies, local TIKA offices, etc.
Members	MoNE, TTC (Project Manager), TIKA, JICA Expert

3.6 Select target organization(s) in each target country.

Through task 3.4 and 3.5, discuss and select organizations, which will be the target organizations for the recruitment of the training participants. In doing so, it is important to consider the implementation structures of the technical education and vocational training, government policies and future prospective of the target countries.

For the target countries of country focused training, joint needs survey mission in 3.5 will sign a joint agreement with the government of the target countries. During the survey, discuss the implementation structures of the target countries, narrow down the options, and consult with the government of the target countries.

For the selection of the target organizations, following criteria are deemed to be important. Details of the each criterion will be decided through the discussion with relevant Turkish organizations.

- 1) The technology is implemented or planned to implement in the future by the target government. The target organizations are facing challenges on the quality and the trainers' capacity development for technology. In addition, those contents must be the things, which TTC are capable of teaching.
- 2) The organizations are capable of assigning additional budget, personnel, mechanical equipment for introducing new contents to the organizations.
- 3) The organizations need to agree on three-year capacity development of their teachers, agree on sending the same individuals to the training held once every year.
- 4) The organizations are committed as an organization to support the trained participants, to provide opportunities with them in order to utilize and disseminate their learning.

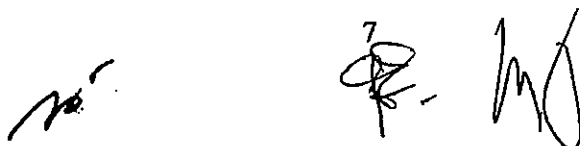
3.7 Establish specific project goals for each country.

Set the final goal to be achieved through the three-year training. For the target countries of group training, set one final goal among five target countries. On the other hand, for the target countries of country focused training, set a final goal and a road map for each country. Those decisions should be made during the joint survey mission in 3.5, considering local situation of each country. In addition, based on the roadmap, structuralize the frameworks of the management by objectives and the training program evaluation proposed (fundamental policy 2). Through developing the frameworks, clarify the functions, roles, task details, and task flow of the training. For the development of the roadmap and the method of management by objective, consult with the implementation organizations and agree on M/M.

3.8 Develop/ improve training curriculum.

Based on the targets set in 3.7, develop curriculum for the group training and the country focused trainings. If revision is necessary for the training period, consult with relevant organizations including JICA Turkey office beforehand, since the expenses may change accordingly.

For developing the curriculum, it is important to consider the technical level and goals of each



country. It is also important to consider the time loss due to interpretation during the lectures.

There will be two training programs: country focused training and group training. The training implementation plan is listed below.

Table 6 Draft Implementation Plan of the Country Focused Training and Group Training

Topic/Course Area	Country Focused Training	Group Training
Target Countries	Pakistan, Uzbekistan, Kazakhstan, Azerbaijan (4 countries)	Afghanistan, Kyrgyzstan, Palestine, Tajikistan, Turkmenistan (5 countries)
Background	-Economy and industries are developed to a certain level. -Technical education/ vocational training system are well established. -There are certain needs of IAT technology in the industry.	-Economy and industries are still developing. -Technical education/ vocational training system exists However, the level is not so high.
Training Contents	-Related to IAT	-Basic level, focus on giving basic introduction on IAT (Electricity, electric related courses, etc.).
Training Strategy	-Set final goal and a road map for each country. -Target group will be given homework between the trainings every year for capacity building. -3-week training. -4 courses every year (10 participants from 4 countries, separate course for each country)	-4-week training, once every year for 3 years. -2 courses of 20 participants every year (except for the first course)
Selection of Participants	-Select 10 participants from 4 countries at the 1 st year and the group will be fixed.	-Selected every year. -2 participants from each of 5 countries.
Scope of Contents	-Technical training and training methods, curriculum planning and how to introduce new training to the existing program .	-Technical training, and training methods, action plan development.

3.9 Prepare/ improve training material.

Based on the result of 3.8, revise the existing training material and confirm on the materials needed for each training event. If additional materials were essential, create or collect information from relevant organizations. Translation of the material will be made with the help of TIKKA.

3.10 Determine training schedule.

Through the process mentioned above, decide the implementation period and length of the training, and develop training schedule. At the same time, set a rough training schedule for three years. Pay attention in order not to schedule several training at the same time, considering the workload and the capacity of the TTC accommodation (maximum of 60 people).

3.11 Finalize the Objectively Verifiable Indicators and confirm PDM.

Based on agreed work plan draft, revise the PDM, set the objectively verifiable indicators for the project purpose and outputs with counterparts.

3.12 Hold 2nd Joint Coordination Committee (JCC) meeting.

Based on the result of the following activities: needs survey, development of the training curriculum, training schedules and objectively verifiable indicators, discuss and agree on 1st year work plan with related Turkish organizations.

At the same time, agree on the objectively verifiable indicators of PDM.

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3.13 Support the conclusion of the Minutes of Meeting (M/M) on training contents.

Based on the agreement in 3.12, create M/M draft (main points: detailed contents, detailed roles and responsibilities, budget and cost sharing, detailed task procedure, and task schedule) and support the conclusion of the M/M between MoNE, TIKA and JICA.

3.14 Develop and distribute GI (General Information) to target countries.

Based on the developed curriculum (3.8) and training schedule (3.10), develop GI for both country focused trainings and group training. It is recommended that the recruitment of the participants would start 6 months before the training implementation and 1st selection will be done 4 months before.

However, it is difficult to make 1st selection of the participants 4 months before the actual training for year one, due to development of the curriculum and schedule, which will be developed based on the result of the needs survey. Thus, it is crucial to cooperate with related organization including TIKA in collecting the application form within one month after the distribution of GI, and planning 1st selection of the participants.

BOX 1 Tips to get application.

For the first year, it is often the case that there would not be enough candidates who apply. The reasons may be the following: publicity of the training to the related organization is not enough; effective distribution of the GI is not established or applicants not used to the procedure. Learning from our past experience of international training, we would like to propose following activities to secure number of the participants. Sending GI through direct mails as a back channel, asking target country to recommend several participants, and asking JICA offices in target countries to send GI to related organization. In addition to this, it is recommended to ask ex-trainees to distribute the GI and ask international organization in the target countries for the recruitment.

3.15 Select participants for the country focused training.

Based on the strategies 3.7, select trainees for the country focused training from the target organization listed in 3.6. It is advised to consult and coordinate as much as possible with the relevant organizations during the needs survey. With the help of TIKA offices in target countries, which coordinate with the target organizations, appropriate candidates should be selected.

3.16 Select participants for the group training.

Develop guidelines for applicants and recruit the candidates through TIKA offices in target countries. Coordinate well with local TIKA offices and select trainees from the target organization listed in 3.6.

3.17 Arrange logistics.

Agreed roles and responsibilities in 3.13, prepare for the training. Monitor the task procedures of relevant organizations and appropriate preparation should be made.

3.18 Implement training.

Implement the training in TTC based on the implementation strategies and implementation plans. Evaluation, curriculum and training materials of each course will be effectively revised considering the workload of the trainers. It is advised to have at least one month in between the trainings. In order to do so, review the plan of operation agreed in R/D, to implement two country focused trainings at the same time, rather than implement trainings in series. It is essential to consult with counterparts in TTC, since 2 sets of team including course leaders, instructors will be needed for

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implementation.

Implementation schedule for the year one is proposed below:

- 1st group training: 2 weeks in November 2012
- 2nd group training: 4 weeks in April 2013
- 1st country focused training: 2 courses at the same time in November 2012
- 2nd country focused training: 2 courses at the same time in April 2013

For the training, it is proposed to include development of the action plan and support trainees to utilize the technique and knowledge learned.

3.19 Conduct needs analysis and human resource development seminar for group training countries.

Conduct needs analysis of the industries of the target countries and human resource development seminar for the group training countries. There are two main purposes for the seminar. One is to plan training programs for the following year. Another is to build relationship between relevant organizations through information sharing and discussions. It is important to understand the future perspective, the needs of the IAT related industries, and the needs of the human resource development in relevant field. It is proposed to invite project members, group training trainees, relevant Turkish organizations which promote investment toward target countries, such as chamber of commerce and industry group specialized in the field, researchers and Japan External Trade Organization (JETRO).

3.20 Evaluate contents of the training based on Kirkpatrick Model

For the evaluation of training program, the Kirkpatrick Model, which was created by Prof. Donald L. Kirkpatrick, Professor of Emeritus of the University of Wisconsin in the United States and a past president of the American Society for Training and Development (ASTD), is internationally well know. The model consists of four levels of training evaluation: Reaction, Learning, Behaviour, and Result. The details are shown in the chart below.

Table 7 Kirkpatrick Evaluation Model

Evaluation Level		Comments
1 st level	Reaction	To what degree participants react favourably to the training. Usually measured by the questionnaire conducted after the training. It is important to remember that this is non-objective measurement, only measuring the degree of satisfaction of the participants from their subjective point of view. The effect of the training itself cannot be measured by this.
2 nd level	Learning	To what degree participants acquire the intended knowledge, skills, and attitude based on their participation in a training event. Usually pre- and post-test are used for the evaluation of acquired knowledge and skills. In addition, for the skills, it is common to observe one's performance during practical training. For the attitude, it is often evaluated by the questionnaire or the evaluation by the trainers.
3 rd level	Behaviour	To what degree participants apply what they learned during training when they are back on the job. It is usually measured by how they utilize their leaning at their workplace after returning to their home countries. This could be achieved only after achieving 1 st and 2 nd level. For the behavioural change, the environmental factors (also mentioned as organizational factors) play the key roles and four following points must be covered. -Will of the participants to change -Individual abilities necessary for the change (knowledge and skills) -Work environment where participants can produce change (such as budget, organizational adaptation to changes, approval by supervisors, cooperation by

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Work Plan for the First Year of the Project (Draft)

		colleagues, possibility of the procuring materials, etc.) -Reward for the change maker (such as promotion, reward, authority, etc.) There are obstructive factors (such as family affairs, restriction by organization, etc.), and achieving behavioural change is not easy task.
4 th level	Result	To what degree targeted outcomes occur as a result of the training event and subsequent reinforcement. This is the consequence of the behavioural change, which could be measured by the improvement of the work efficiency, the work quality, improvement of organization, and contribution to the performance.

In this project, following evaluation is proposed:

Level 1: By doing questionnaire after the training, collect information such as training contents, operation, lecturers, and training materials from the participants. Also set evaluation meetings with the training implementers, and collect information such as challenges and problem faced during the implementation. Then analyze the evaluation result and prepare for the training next year. It is essential to share following information: things to be improved, lessons learned and good practices.

Level 2: Evaluate the effects of the training through written test and performance test.

Level 3: By using the web-based information sharing system, conduct follow-up activity. The activity is to support and evaluate the impact of the knowledge and skills learned in international training in Turkey. For example, how the knowledge and skills are utilized in their organizations, how the behaviour or the actions of the trainees have changed, etc.

Level 4: Through evaluation level 3, try to evaluate final result of the training, how they have contributed to their organizations.

3.21 Conduct Instructional Design Workshop

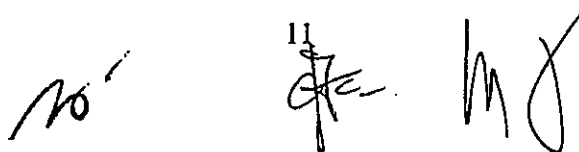
To conduct Instructional Design Workshop for the following purposes:

- 1) To review and improve the drafts of the training curriculum and materials, with the help of the top Japanese Instruction Designer.
- 2) To develop the capacities of the Turkish project members (TIKA, MoNE, TTC) through discussions with the experts who conducted the third country training in other sectors of governmental agencies of Turkey. Information such as how they developed, operated and evaluated the third country training will be shared.
- 3) Through this event, motivate the implementers of the third country training.

3.22 Develop follow-up plans for trained participants in each country.

It is assumed that the trainees who return will need some support from the trainers in TTC, as they bring back the training result and start to develop their activities in their home country. In order to support this, develop a follow-up structure and a plan for implementation. For the TTC follow-up activities, four following activities are proposed: monitoring of trainees' activities, additional technical support needed for implementing their activities, possibilities of the supports to the additional needs, actual support.

These follow-up activities will only be technical assistance which TTC trainers can cover; and things which require additional inputs such as implementation of the infrastructures will be omitted. Those additional needs will be treated separately; the methods of requesting those assistances to Turkish government through TIKA and related organizations will be determined through discussions with relevant organizations.

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3.23 Develop web-based follow-up system.

According to the follow-up plans (3.22), develop new web-based information sharing system and establish the operational structure. The designing of the system will be made under the leadership of JICA Experts. The coding of the system will be outsourced to public companies in order to decrease the workload of the counterparts. Developed system will be uploaded to TTC server and controlled along with the TTC website. It is advised that the update of the system is controlled by the TTC members in collaboration with TIKA, if necessary.

This system will be designed in such a way to be used as a communication tool amongst the trainees, and also between trainees and TTC trainers. It will provide the opportunities to create strong network. Especially for the country focused training, it will be used as tool to provide technical support for trainees' activities in their home countries.

The functions of the system will be proposed as follows: consultation service regarding the training, information archive (reference training material, handouts, case study, etc.), providing updated information regarding IAT teaching methods, active communication tool supporting their network, collecting feedbacks (post evaluation, etc.) and other information from the trainees, etc. In the future, there is possibility to use it as a learning management tool during the training.

To introduce new web-based follow-up system, management and operation of the system will be the crucial part. Thus, discussions between implementers and relevant organizations will be essential for the sustainable and effective system. We need to keep in mind the organization capacity of TTC and also the capacity of the counterparts.

3.24 Implement the seminar for effective operation of the web system.

For the purpose of applying the new follow-up system developed in 3.23, conduct the seminar to learn the tips for active communication in the net communities. Lectures will be invited from the successful SNS (Social Network Services) service provider in Turkey. In the seminar, the operational management workshop by the coding company will also be included. Through these activities, promote active and effective follow-up activities.

BOX 2 Tips to utilize effective web-based follow-up system.

For active application of the new web-based system, which will be used for a follow-up of the trainees who return, the deep relationships of mutual trust between the trainers and trainees is very important. Building the relationship during the training is the key to maintain their relationship after the training. Thus, during the training, it is essential for them to actively exchange their opinions and share information.

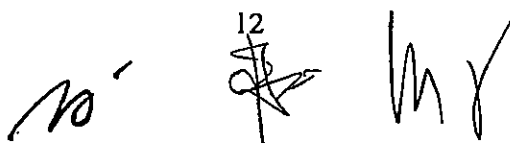
In addition, it is important to make trainees to get accustomed to information sharing by using IT. It is proposed to create a way to share information utilizing IT during the training.

3.25 Develop the 1st year project progress report.

In the end of the first year of the project, develop and submit the 1st year project progress report, covering all the project activities made. The report will be presented in JCC.

3.26 Hold 3rd Joint Coordination Committee (JCC) meeting.

With the help of the project manager of the counterparts, third JCC meeting will be held. At the meeting, we will share the result of the 1st year activities based on 1st year project progress report and agree on the activity plan of the 2nd year.

12




**MINUTES OF MEETING
OF
THE SECOND JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES (IATE)
IN THE REPUBLIC OF TURKEY**

Agreed upon between

Ministry of National Education,


Turkish Cooperation and Coordination Agency

and

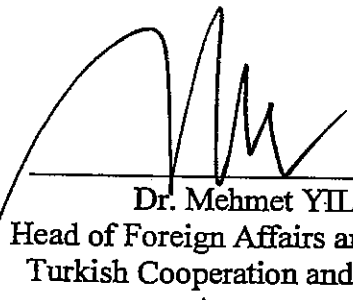
Japan International Cooperation Agency

Ankara

18th June 2012


Mr. Yücel YÜKSEL
Head of Department,
General Directorate of Vocational and
Technical Education
Ministry of National Education


Dr. Takujiro ITO
Chief Advisor,
JICA Expert Team
IAT Extension Project


Dr. Mehmet YILMAZ
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

The Second Joint Coordinating Committee (hereinafter referred as the "JCC") Meeting on the "Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey" (hereinafter referred as "the Project") was held on June 18, 2012 in meeting room of Vocational and Technical Education General Directorate-MoNE with the participation of Ministry of National Education (hereinafter referred as "MoNE"), Turkish Cooperation and Coordination Agency (hereinafter referred as "TIKA") and Japan International Cooperation Agency (hereinafter referred as "JICA") as well as Japanese Expert Team and Turkish Staff of Teacher Training Center (hereinafter referred as "TTC") (refer to Annex 1).

A. Agenda and Summary of the meeting:

Following are the Agenda and summary of the meeting

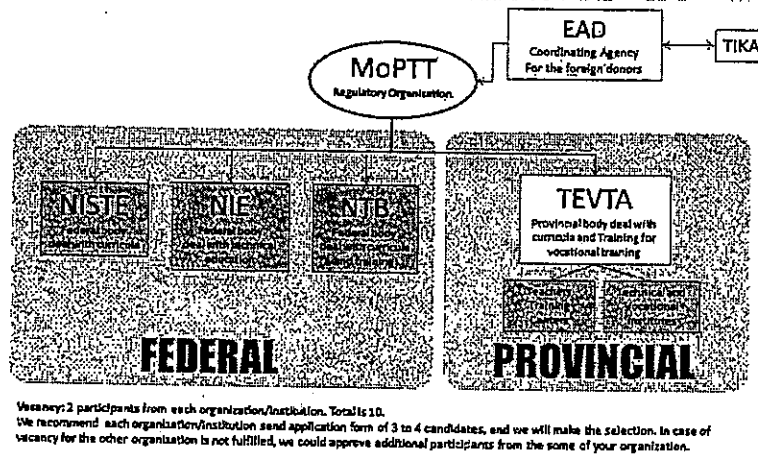
1. Welcome Speech and Explanation of the Agenda by Mr. Yücel YÜKSEL.
2. Presentation of the Result of the Need Survey by the survey team: The survey team presented the report of the need survey conducted in Pakistan, Kazakhstan and Azerbaijan. The team identified the need of the IAT of each countries, possible target institution and flow of the procedure for the invitation and selection of the candidates.
3. Proposing Training Program by Mr. Murat Özdeveci: Based on the results of the need survey, TTC staff and experts proposed the draft of the training program to be conducted during the first year of the project. The proposing plan includes program for executive managers and administrators of 3 country focused training courses in the first year of the project.
4. Analysis of the situation of the TTC by Mr. Takujiro Ito: The chief advisor of the project presented the report of the analysis including (1) Capacity of the human resources, (2) Organization and (3) Institutional Back up system. Mr. Ito presented the strength and weakness of the current situation and proposed some countermeasures to be taken by each stakeholder in order to secure successful implementation of the training program.
5. Discussion Topics: The main discussion point was on the execution of the budget of the training program by each stakeholder agreed by the Record of Discussion of the project. JCC members agreed to take necessary action regarding the budget prior to the consultation with the related authorities.
6. Wrap up of the Meeting by Mr. Yücel Yüksel.

B. Detail of the meeting:

The results of discussions which were followed by the participants along the above agenda (refer to Annex 2) have been summarized as follows:

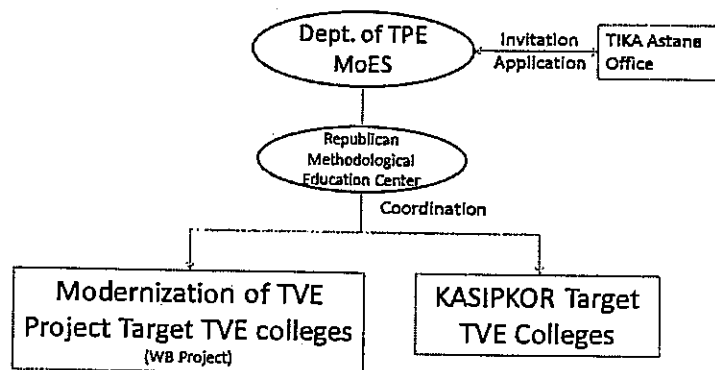
1. Welcome Speech and Explanation of the Agenda
Mr. Yücel YÜKSEL firstly conveyed the greetings of Mr. Ömer AÇIKGÖZ, Director General of MoNE to all participants and expressed his excuses for not attending the meeting due to his busy schedule.
Then, he delivered a short welcome speech and explanation of the agenda.
2. Presentation of the Results of Need Survey
Mr. Gürcan BILDIR presented the results of Need Survey for three target countries (Pakistan, Kazakhstan and Azerbaijan) (refer to Annex 3). Here below are some additional information given by Mr. ITO and Mr. BILDIR:
 - 1) Pakistan
 - Survey team found Pakistan as the typical ideal case for conducting very useful training activities in IATE concept.
 - Their technical standard is quite high, but there is so much discrepancy.
 - Some institutions are very developed by the help of some donors, but some other institutions are very low level.
 - There are 8 Ministries, conducting technical and vocational education (hereinafter referred as "TVE") independently, but no communication between each other.
 - Then, with the decentralization, those 8 Ministries transferred TVE to provinces, which caused more confusion.

- Now, Ministry of Professional and Technical Education, which was the host of need survey, is trying to collect the different institutions, belonging to different Ministries, under their roof.
- Here below is the proposing target institution and its application flow. It includes the target institutions from both federal and provincial bodies.



2) Kazakhstan

- There are two on-going projects on TVE in Kazakhstan, World Bank Project and Kasipkor Project.
- Although there are many institutions, Ministry of Education and Science recommended the need survey team to select the target institutions from those two projects' institutions.
- In this case, those institutions can be a good candidate for proposing IAT curriculum as well as facility, since they have budget to buy the necessary IAT equipment.
- Here below is the application flow chart, including the target institutions.



- Proposal of survey team, which is to invite executive managers and administrators of TVE in 1st year, is commented as logical by JCC members in order to give them a general impression of IATE Project and training capacity of TTC on IAT.
- It is stated by Mr. ITO that the budget calculation for those high rank people will be higher, but if this program can be managed well, it will be a successful model for this kind of third country training program under the scope of cooperation project.

3) Azerbaijan

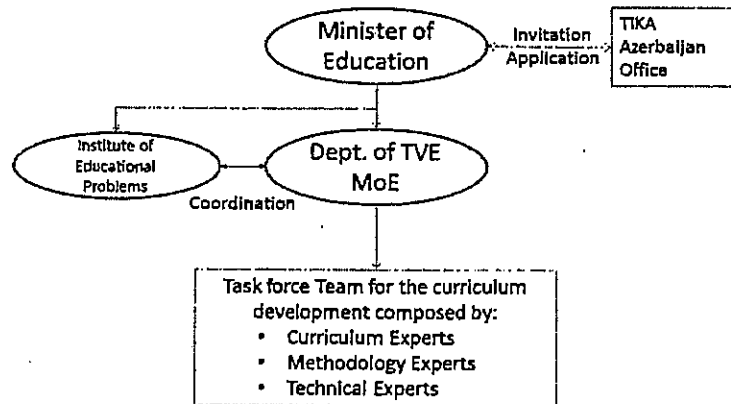
- Azerbaijan Ministry was expecting to be given equipment donation by IATE project, but it is explained by survey team that the aim of IATE project is to provide only technical training to the technical human resources of target countries on IAT field of TVE.

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- In spite of very modern cities with very new buildings in Azerbaijan, the technical and vocational high schools have very poor facilities.
- Since there is no equipment, no curriculum, no budget allocation and no well skilled technical human resource as trainer on IAT in TVE schools, a way has to be found on how to get equipment on IAT.
- General Directorate of TVE plans to establish a "Resource Center" as a model school and develop IAT curriculum for conducting a pilot education there. Then, when they can allocate more budgets, they plan to spread this education to the other TVE schools in country.
- Here below is the application flow chart, showing the target group.



3. Proposing Training Program

Mr. Murat ÖZDEVECİ expressed that;

- The first training implementation program, which was proposed in 1st JCC on April 12, 2012, was focused only on technical training by inviting 10 technical teachers of IAT and related fields from each target country.
- But, after completing the need survey on target countries, it was evaluated that "curriculum development" and "curriculum authorization" has to be given place in training plan, particularly for Kazakhstan and Azerbaijan.
- Hereupon, current Implementation Plan for Country Focused and Group Training Activities was revised in accordance with the results of Need Survey (refer to Annex 4).

Then, this plan was kindly submitted for the confirmation of JCC members.

As shown on Annex 4, for the 1st year of training, while the number of participants for Kazakhstan and Azerbaijan is 10 for each, the total number for Pakistan is 12. Mr. ÖZDEVECİ explained the reason of this difference by giving below information.

- 1) For Pakistan, which was the first visited target country in need survey, it was planned to invite total 10 technical teachers from different technical and vocational education institutions.
- 2) For Kazakhstan and Azerbaijan, depending on the need survey results, need survey team and other TTC lecturers jointly evaluated for those two countries to invite;
 - For the 1st Year;
 - 2 executive managers from Department of Technical and Vocational Education of Ministry of Education, in order to give them an overview of IAT as well as visit the facilities of following year's training and industries where is applying IAT.
 - 8 administrators from target technical and vocational education institutions, who can prepare the draft proposal of the Project based on the IAT Action Plan Workshop, which will be conducted in TTC.
 - For 2nd and 3rd Year;
 - Technical teachers of target technical and vocational education institutions.

- 3) Since executive managers and administrators were being planned to be invited from Kazakhstan and Azerbaijan, Project team thought that it would be appropriate to add 2 executive managers from Pakistan, too, as additional to 10 technical participants, with the aim of giving an overview of IAT in Turkey.
- 4) Since there is no information about the technical level and the needs of Uzbekistan on IAT due to the cancellation of need survey, Uzbekistan is being thought to be excluded from training courses for the 1st year. If this exclusion is approved by MoNE, TIKa and JICA, 2 additional executive managers for Pakistan are thought to be tolerated from the budgetary point of view.
- 5) The executive managers and administrators from 3 countries will be invited only for the 1st year. However, 10 technical participants from each country will keep attending the IATE Project training courses for 3 years.

Above explained implementation plan was submitted to the confirmation of MoNE, TIKa and JICA representatives in JCC. Then, all parties confirmed that;

- Above presented training implementation plan, including the invitation of executive managers and administrators from Pakistan, Kazakhstan and Azerbaijan was confirmed.
- Exclusion of Uzbekistan training from the 1st year' training plan was confirmed (Next years' Uzbekistan training will be decided with the further discussions).
- MoNE will send an official letter to Uzbekistan via Ministry of Foreign Affairs for informing their exclusion from the 1st year-training plan with the reason of not accepting need survey request.
- Even though the total cost of accommodation, transportation and training for high rank people will be higher than technical training cost, all sides confirmed that it can be covered from the budget, previously allocated for Uzbekistan.
- JICA also stated economy class air flights will be offered to the invited managers and administrators.

4. Analysis of the situation of TTC

Mr. ITO presented the institutional analysis of TTC for giving the current TTC situation (refer to Annex 5). Then, he pointed out that the activity contents of TTC have to be revised based on this analysis. Here below are the explanations of Mr. ITO under each item of this topic and related discussions.

1) Capacity of Human Resources

(1) Regarding IAT skills of TTC Lecturers

Based on the final report of 2nd phase SPREAD Project, TTC lecturers have reached to a certain level on IAT field. But, since IAT is highly innovative and constantly updating technology, they need to keep updating their knowledge and skills and acquire the latest technology.

- Mr. YÜKSEL asked if lecturers need any course or seminar for updating their IAT knowledge and skills.
- Mr. ÖZDEVECİ replied that even if they are trying to follow rapidly changing IAT technology by reading the latest printed or digital books, difficult to say they are well skilled on every subject on IAT.
- He added that it will be very useful to take a course or seminar by a Japanese Expert on weak points of TTC.
- Hereupon, Mr. ITO commented that one of the weak points of TTC is Teaching Methodology. Then, he reminded that Japanese Shimko Company visited TTC on June 11-12, 2012 for setting up a small scale PLC mechanism training set and Mr. KUMAGAI, Executive Managing Director, gave a short training on this set. Since Mr. KUMAGAI has big experience on development of training sets and also textbooks, which are already used by TTC lecturers as reference books, it will be very useful, if he can be invited to TTC as a short term expert for giving training course on Teaching Methodology, which is the weak subject of TTC.

(2) Regarding Training Program Development

- Mr. ITO asked MoNE to support TTC on training curriculum development process. This support may be provided by calling some of TTC lecturers to MoNE to study with a person in charge of curriculum development or by assigning a person from related MoNE department to TTC for a certain period and work with TTC lecturers on the content development.
- Mr. YÜKSEL replied that he will discuss this matter with Mr. Osman YILDIRIM, Program and Educational Material Group Manager, for assigning a related person to TTC for giving a seminar to TTC lecturers on curriculum development. The duration of seminar can be decided in further discussions.

(3) Regarding Material Development Skills

- Japanese Experts of the Project will guide for the development of materials like Audio Visual materials, worksheets, assessment tools, as well as video programs, posters and brochures, which is very important especially for the 1st year's managers training. But, since the assignments of experts were delayed to the project site, outsourcing will be necessary for the production of some materials because of time restriction.

(4) Regarding Knowledge Management

- Knowledge management system has to be strengthened, especially for sharing all the information with all staff, in order not to lose any information in case of somebody's leaving from the institution.
- For the time being, "basecamp" is used for information sharing. But, since its capacity needs to be enhanced more, all the related people with IATE Project are kindly asked to participate basecamp more and share all the project related information.
- After having information, the collected information has to be organized by making a certain format, process chart, manual, and guideline. Those will be the knowledge of institution.

(5) Training Management

- Need survey was really good experience on clarifying how to identify the needs and build a training program based on identified needs.
- Need survey on three target countries was completed successfully not only by survey team but also by all other TTC staff in Izmir by their backup support.
- All the data collected by survey team was shared with TTC staff through having video conference meetings for many times, and TTC lecturers prepared the draft of training program proposal for submitting to the related country.
- TIKA Coordination Offices in visited target countries also gave big support for conducting survey team's activities.
- It was very successful team working. If this kind of system can be developed and followed in each step of project activities, project can be implemented very effectively.

2) Organization

(1) Implementation Structure

- Beside the implementation structure of training course, as taking JICA training courses as model, a training coordinator/translator, who will take care of daily life of the trainees and can speak their language, should be considered in the future.

(2) Organizational Function

- Project team's proposal is to have also a research and development function in TTC.
- Because, new training programs will be challenged for different people having different background, different culture and different language, which is not easy.
- So, we need to make a PDCA (plan-do-check-act) process and search how to make more effective training.

- As a result, a combination of research & development and the dispatch of experts with training can improve the quality of training program in TTC.
- (3) Accommodation Facilities
- In order to be able to give training on international standards, TTC accommodation facilities have to be improved.
 - The needed improvements are recommended by the Japanese experts, based on observations in TTC and their international training experiences (refer to Annex 6).
- (4) Equipment and Training Resources
- Since all the computers and software in TTC laboratories are very old (from 2006), they need to be replaced with the latest ones.
 - The cost estimation of first year training program, prepared by TTC lecturers, also includes the training related part (refer to Annex 7).
- 3) Institutional Backup and System
- (1) Policy and Status of TTC
- MoNE should set the policy for the future goal and role of TTC. Based on this policy, TTC should set strategies for the achievement.
- (2) Cooperation among the Stakeholders
- MoNE-TIKA coordination needs to be strengthened in order to make a good coordination for all steps of the training program.
 - TIKA should strengthen the knowledge management system for sharing all the information and experiences inside of the organization.
 - When a staff is assigned to a duty, he/she can prepare a manual on how to handle the process of that duty. So, that manual will be a guideline for the other staff, who will be assigned to the same duty later. And, it will decrease time consuming and increase the effectiveness of the related duty.
 - Ms. Ayşe ÖRÜN stated that she will convey this information with her colleagues and study on knowledge management system.
- (3) Budget
- The status and running cost of TTC, which is under discussion for long time, need to be officialized.
 - For doing it, a sustainable TTC operation plan needs to be developed.
 - First, annual utilization plan of TTC has to be defined as the goal of organization.
 - Then, a cost calculation has to be made based on this utilization plan.
 - And also TTC has to make a plan for conducting training courses, like;
 - In-service-training courses for the technical teachers (as the first priority),
 - Training courses for the technical staff of private companies (in remaining time from in-service-trainings)
 - GTZ Project of Ministry of Health is very good example for providing the sustainability of a training center. The priority of this training center is conducting training courses for Ministry of Health. If available, it can be used for other Ministries' training courses. If there is still free time of training center, it can be opened for business use with the private companies. This training center has also a restaurant, open to the public and bring a continuous income to the training center.
 - TTC needs such a good idea for developing a utilization plan in order to ensure the sustainability in long term. Otherwise, it will be very difficult to provide the necessary maintenance of the TTC facilities.
- 4) Proposal of Some Counter Measures
- TTC lecturers need to be supported by MoNE on the curriculum development. Mr. YÜKSEL confirmed the idea of sending one personnel from MoNE, who is in charge of



7



- From the target countries, Pakistan asked if TTC has an international standard accreditation.
- Now, TTC contacted with some companies like Omron, SMC for asking accreditation. Then, they agreed on giving authorization to TTC. TTC will also planning to contact with an international training center in Germany in near future and ask what kind of accreditation and international standards they have.

As the conclusion of this topic, 2nd JCC agreed that the revision of PDM needs more detailed discussions between JCC members. That's why, it is better to keep as it is and keep discussing until the next JCC meeting. In next JCC meeting, the revision will be put into consideration again.

(4) Next JCC Meeting

Mr. ITO proposed JCC members to organize next JCC meeting at the same date with the opening of training course in November, since there will be high rank managers from the target countries in TTC.

After some discussions among JCC members, it was confirmed that 3rd JCC will be held on 5th of November, 2012, in same day with the opening of training course. And, agenda was confirmed as;

- Confirmation of Final Work Plan for entire project period
- Indicators of PDM

6. Wrap Up of the Meeting

Mr. YÜKSEL wrapped up the meeting by giving below statements:

- All the discussed topics, especially the necessity of budget allocation for TTC, will be conveyed to Director General.
- In-service-training course for TTC lecturers on curriculum development process will be organized by dispatching an expert from MoNE.
- Some other possible opportunities will be searched for brushing up the technical knowledge and skills of TTC lecturers on latest IAT. In this context, some companies can be asked to give training to TTC lecturers for reflecting the latest technological innovations in industry.

ANNEX LIST:

- Annex 1 : Attendance List
- Annex 2 : Agenda
- Annex 3 : Summary of Need Survey results
- Annex 4 : Implementation Plan of Training
- Annex 5 : Institutional Analysis of TTC
- Annex 6 : Request for TTC Facilities
- Annex 7 : Cost Estimation for the 1st Year of Trainings

The Industrial Automation Technology Extension Project
For Central Asian / Middle East Countries

The Second Joint Coordinating Committee Meeting (Extraordinary Session)

Agenda of the Meeting (Draft)

Date: June 18, 2012

Time: 9:30 – 11:30

Place: Ministry of National Education Meeting Room, Ankara, Turkey

Chairperson: Ass. Prof. Dr. Ömer AÇIKGÖZ, Director General

Program:

1. Welcome and explanation of the agenda by Mr. Yücel Yüksel (5 min.)
2. Presentation of the Result of the Need Survey by Mr. Gürcan Bildir, Ms. Ülkü Arslan and Ms. Belgin Çağdaş (25 min.)
3. Proposing Training Program by Mr. Murat Özdeveci (20 min.)
4. Analysis of the situation of the TTC by Mr. Takujiro Ito (20 min.)
5. Discussion Topics
 - (1). CP assignment for the project (10 min.)
 - (2). Budget for the training (10 min.)
 - (3). Revision of the PDM (10 min.)
 - (4). Other issues (10 min.)
6. Wrap up of the Meeting by Mr. Yücel Yüksel (10 min.)



WRAP UP OF THE NEED SURVEY



The Industrial Automation Technology Extension Project
for Central Asian and Middle East Countries

Target Countries for Need Survey



Below countries have been visited for the need survey on following dates:

🇵🇰 Pakistan - May 6-13, 2012

🇰🇿 Kazakhstan - May 20-26, 2012

🇦🇿 Azerbaijan - June 3-9, 2012

Evaluations of the Countries



Visited three countries will be evaluated in accordance with the following criterias

- Educational management system
- National standard of education
- Current situation on IAT education
- Curriculum of IAT
- Current level of technical and vocational school teachers
- Current equipment capacity of the schools

Educational Management System



Education management system has been decentralized in Pakistan

The Federal Ministry of Education has responsibility for the development and coordination of national policies, plans and programmes in education including curriculum development, implementation of the policies is the responsibility of the local administration

Ministry of Education and Science has central authority in Kazakhstan

560 colleges, 385 private VET schools under the Ministry of Education and Science

Ministry of Education has central authority in Azerbaijan

107 VET schools, under the Ministry of Education

National skills standarts



- There is national occupational skills standart of TVET system regulating by federal body but need to reform the skills development system.
- Ministry of Education and Science is planning to reorganize national skill standarts in near future by world bank project.
- Ministry of Education is planning to reorganize national skill standarts in near future by Twinning project - EU

Current Situation on IAT Education



- Adjacent department of IAT is existing such as electronics, electricity, industrial control system and machinery.
- Electricity, telecommunication, control system and machinery department already exist in technical colleges.
- Only information technologies departments related to IAT but their purposes are commerce.

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Curriculum of IAT in Pakistan



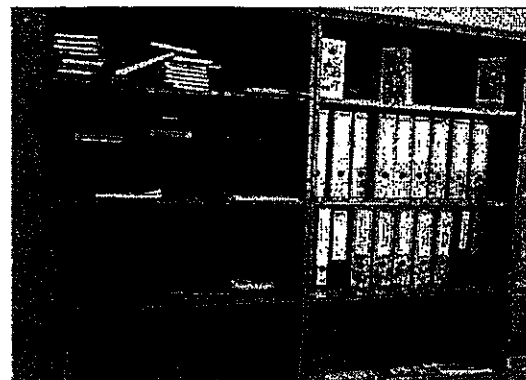
- We have seen curriculum in provincial technical education institution which is similar to IAT curriculum
- Curriculum development and methodology standarts are improved by GIZ - Germany and KOICA - South Korea



Curriculum of IAT in Kazakhstan



- There are adjacent curriculum related with IAT
- Kazakhstan VET system has National standarts
- Schools giving importance to methodology



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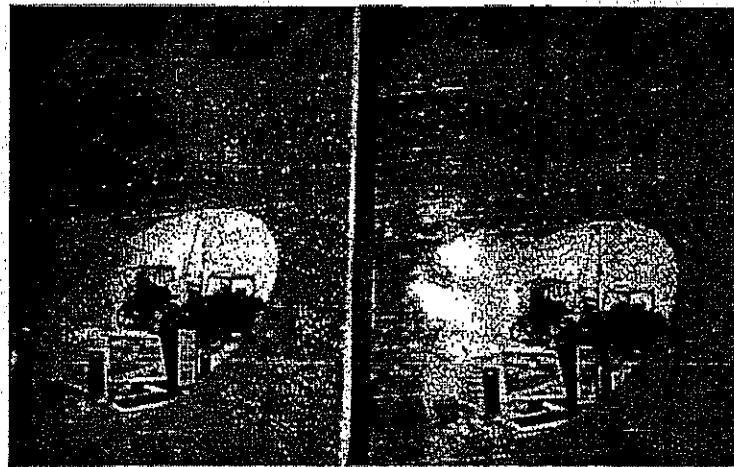
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Curriculum of IAT in Azerbaijan



- There is no IAT curriculum or adjacent department curriculum.



Current level of technical and vocational school teachers



- There are electricity, electronics, mechanics and IT teachers in federal (NTB) and provincial institutions (TEVTA).
- There are electricity, electronics, mechanics and IT teachers in Polytechnic colleges.
- There are only information technology related to IAT

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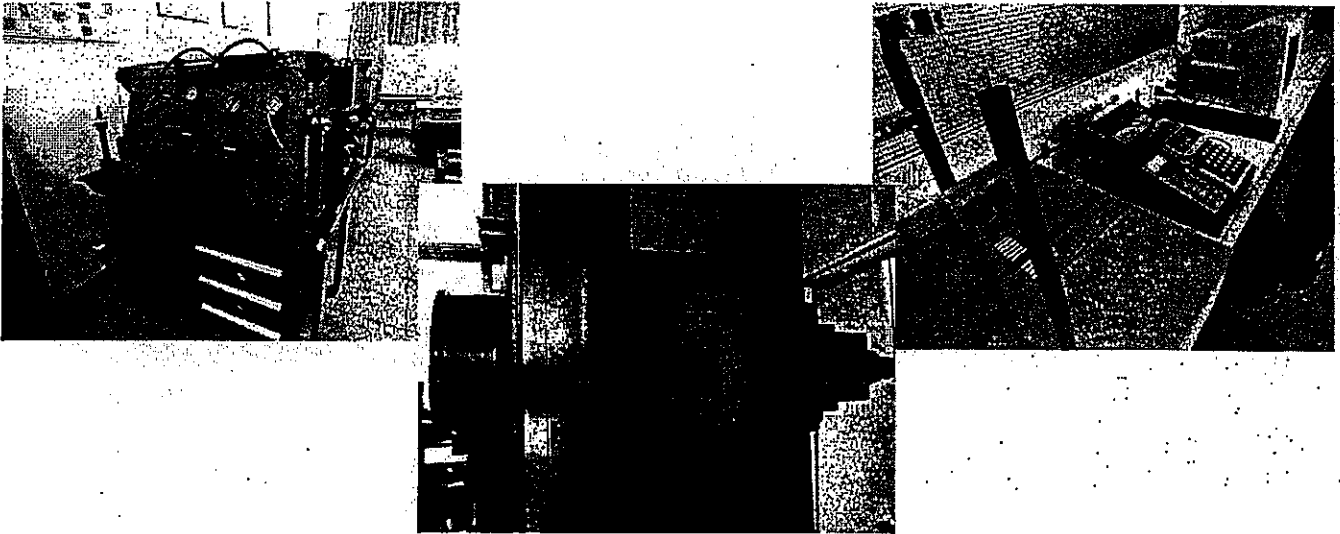
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Current equipment capacity of the schools in Pakistan



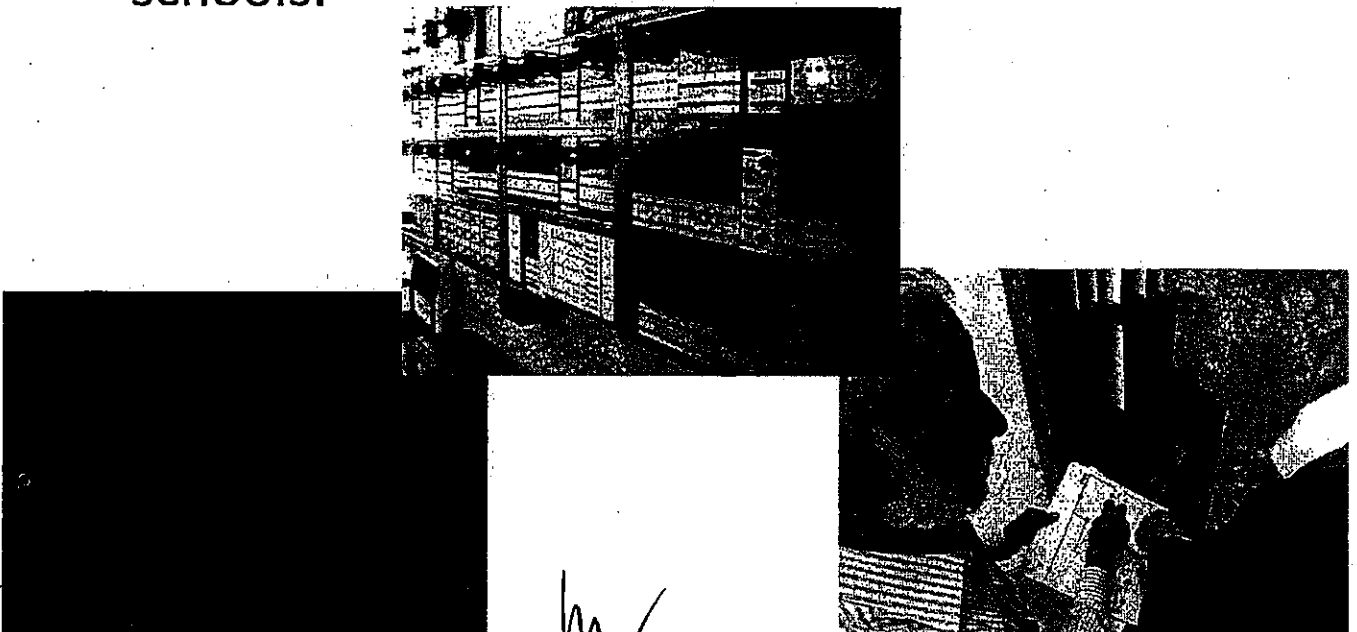
- Some equipments of the schools which we visited based on German companies.



Current equipment capacity of the schools in Pakistan



- Some training materials are developed in schools.



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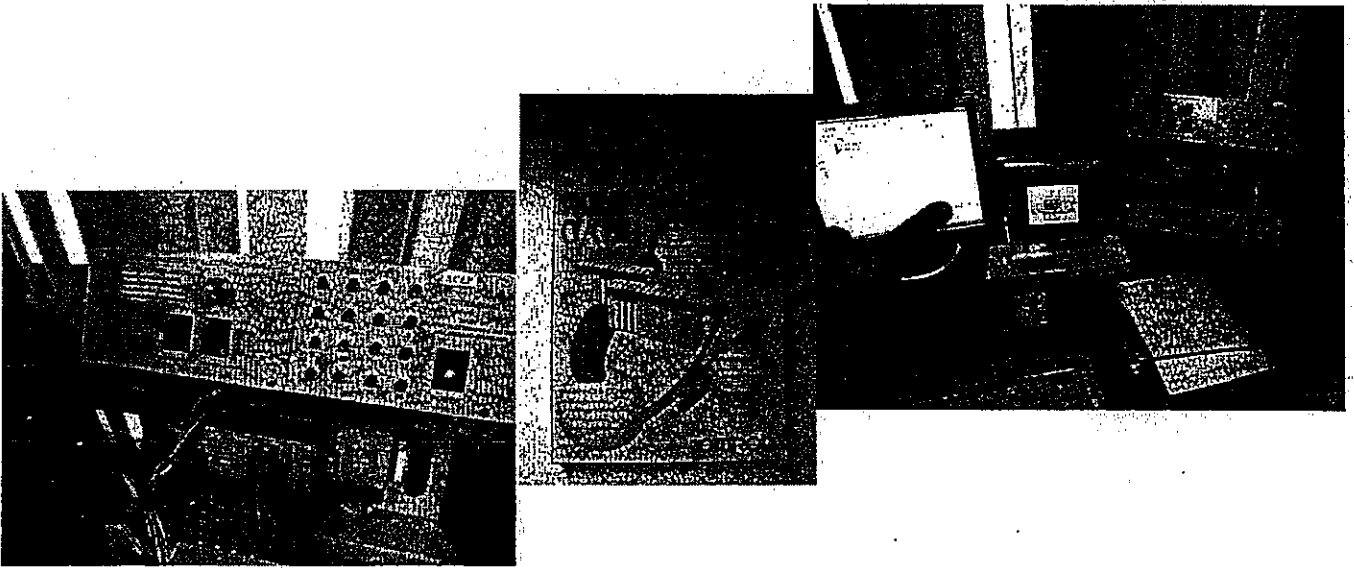
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Current equipment capacity of the schools in Pakistan



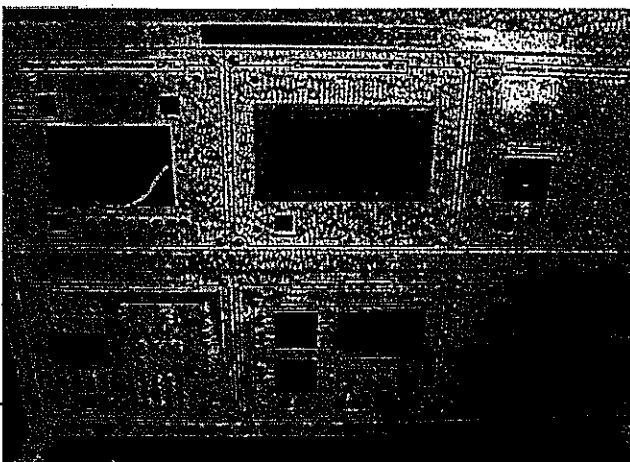
- Scientific institutes such as National Institute of Electronics specialized on IAT.



Current equipment capacity of the schools in Kazakhstan



- Russian training equipments are utilized in Polytechnic Colleges.



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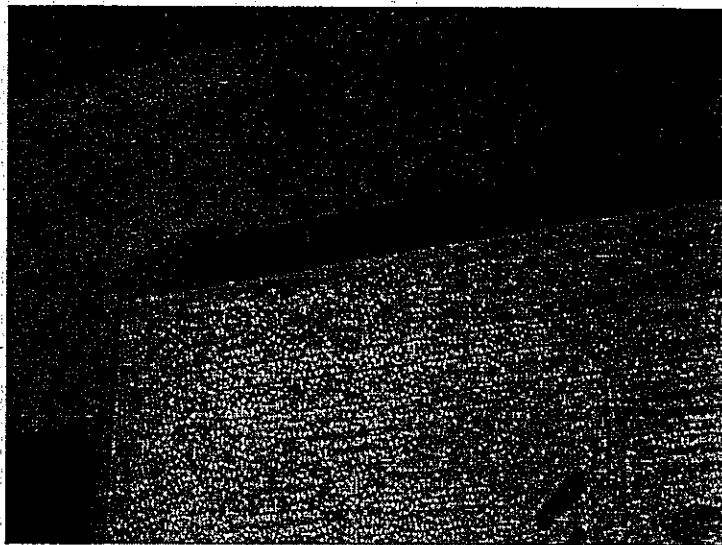
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Current equipment capacity of the schools in Kazakhstan



- Classrooms are equipped with interactive training materials.



Current equipment capacity of the schools in Azerbaijan



- Computer laboratories have been observed related to IAT.



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Conclusions- Pakistan



- ☐ Some vocational institutions in provinces (TEVTA) and scientific institutions (NISTE - NIE) have different pattern of IAT curriculum.
 - ☐ Some institutions from federal body (NTB) have part of IAT program such as electricity, electronics, machinery and IT
 - ☐ IAT training is needed for some of the visited institutions.
 - ☐ New technology on IAT could be introduced to modernize according to their industry needs.
-

Conclusions- Kazakhstan



- Some institutions have already curriculum, equipment and trainers on basic IAT.
 - Based on the actual strategy of the MoES on Vocational and Technical Education, new technology on IAT could be introduced to modernize the content of existing program.
 - Advise is necessary in order to identify the necessary configuration of the facilities and equipment on IAT.
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Conclusions - Azerbaijan



- It has been found that the actual content of the Vocational High School is focused to the basic level of the technical skill and not suitable for the training on IAT.
- New curriculum should be developed and equipment should be installed by the Azerbaijan Ministry of Education in order to make use of the knowledge and skill on IAT provided by IATE project.

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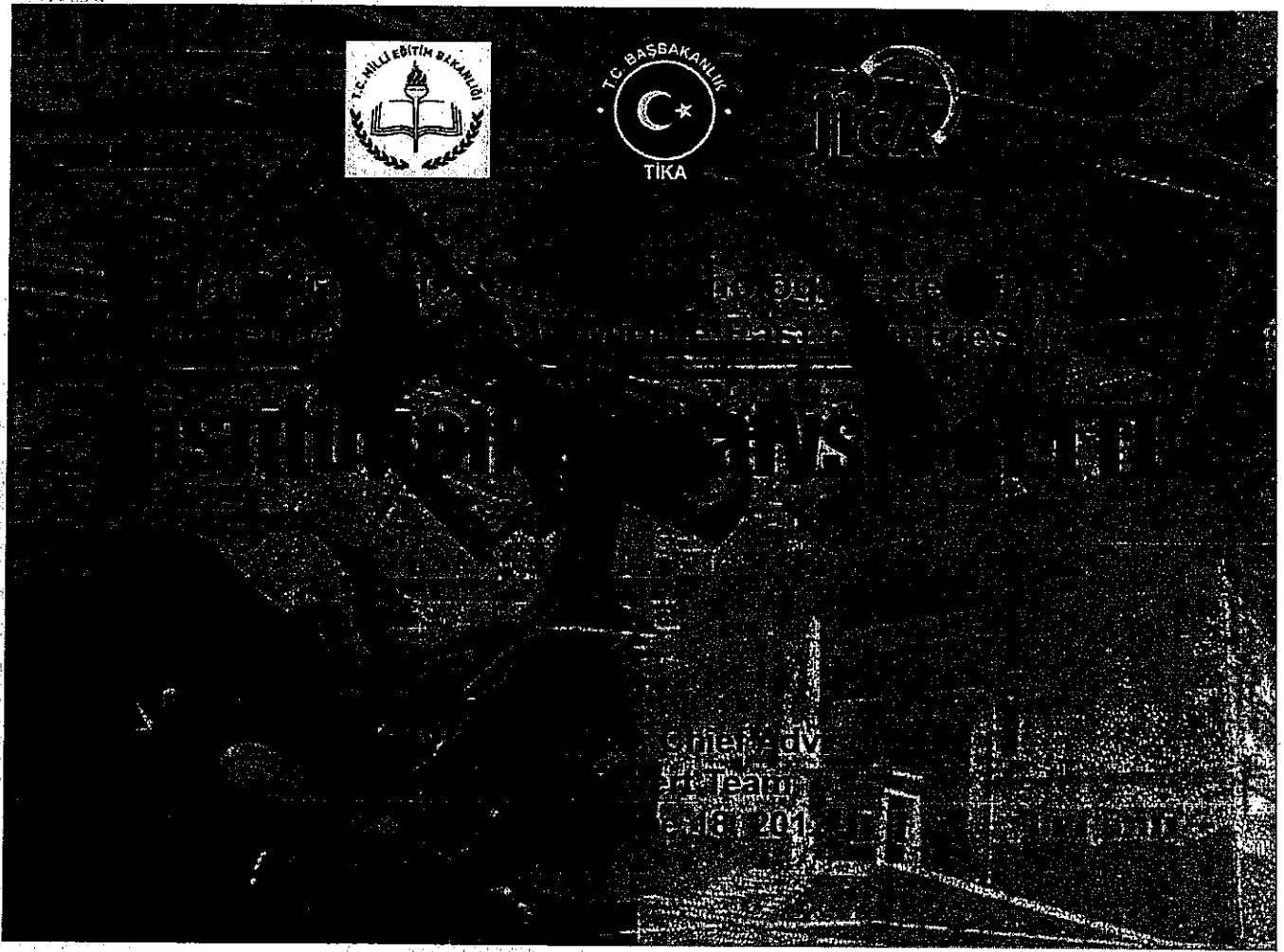
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Implementation Plan sheet for Country Focus & Group Training Activities

No.	Activities	Trainers	In-charge (TTC/Co-Ord)	Number of Participants	Language	Month/Week	October				November				December				JAN				FEB				MAR				APR			
							17	18	19	20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	PAKISTAN-A	TVE Trainers	Telet(TTC)	8	E	Plan									3weeks																			
						Actu.									2 ← 22																			
2	PAKISTAN-B	Executives	Telet(TTC)	2	E	Plan					1 Week																							
						Actu.					4 10																							
3	AZERBAIJAN-A	Executives	Mustafa(TTC)	2	T&R	Plan					1week																							
						Actu.					4 10																							
4	AZERBAIJAN-B	Managers	Mustafa(TTC)	8	T&R	Plan					2weeks																							
						Actu.					4 17																							
5	KAZAKHSTAN-A	Executives	Ismail(TTC)	2	R	Plan					1week																							
						Actu.					4 10																							
6	KAZAKHSTAN-B	Managers	Ismail(TTC)	8	R	Plan					2weeks																							
						Actu.					4 17																							
7	Group Training-A	Managers	Bulent(TTC)	10	E&R	Plan					2weeks																							
						Actu.					4 17																							
8	Group Training-B	TVE Trainers	Bulent(TTC)	10	E&R	Plan																	4weeks											
						Actu.																	1 28											

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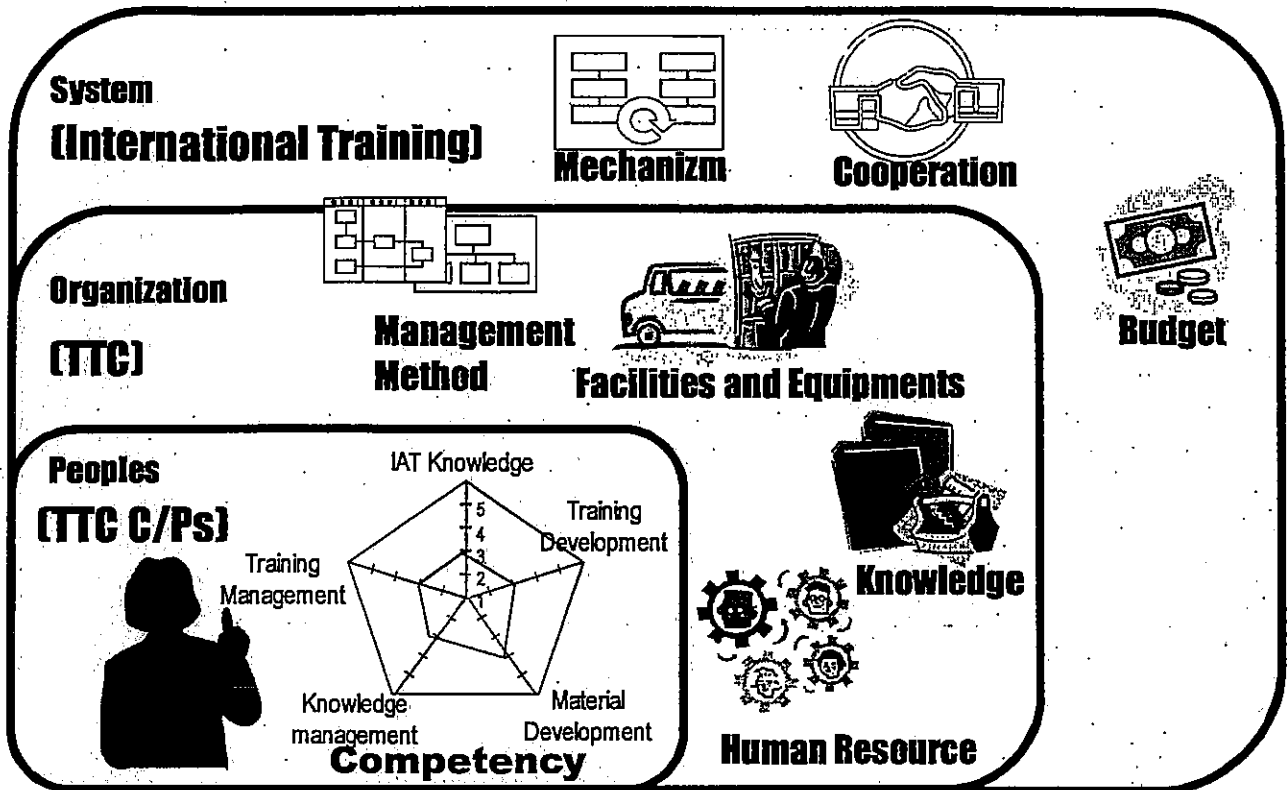
What is necessary for Sustainability of the Activities?

Institutional Capacity Development

Is necessary to assess and plan an integrated development strategy of the Institutional capacity of TTC.

Based on the “Capacity Development Handbook” developed by JICA in 2004, we conducted a rapid diagnosis of the actual situation of the TTC.

Capacity Development of the TTC as International Training Center



1. Diagnosis of Capacity of Human Resources

(1) IAT Skill

- As results of the previous phase of the project, IAT skill of the CPs was strengthen.
- IAT is high innovative field and need constant update of the information as well as latest technology skill.



(2) Training Program Development

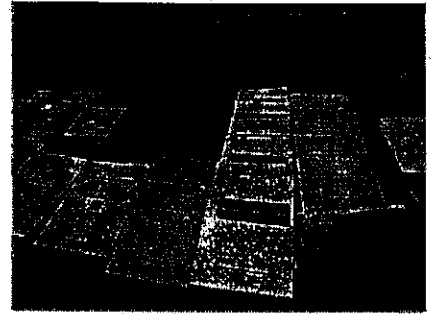
- Need to be strengthen the knowledge and skill regarding the ID (Instructional Design) and development process of the training program.
- In October 2012, ID seminar is planned.
- Need to develop an effective assessment system for the Training Program before October.
- Need some technical support by MoNE for the development of the VTE curriculum development process.



1. Diagnosis of Capacity of Human Resources

(3) Material Development Skill

- Training Modules and textbooks was developed during previous project.
- Need to be strengthen the knowledge and skill on the development of the educational material specially presentation slides, worksheet sheet, assessment tools, and Audio Visual materials.
- Need to develop video program, posters and brochures for the administrators training.
- Expert of the project will guide for the development but, outsourcing is necessary for the production.



(4) Knowledge Management

- Need to be strengthen the capacity of knowledge Management, specially how to share information, how to build an explicit knowledge from the Tacit Knowledge
- An Information System called "Basecamp" was introduced to share and build the knowledge.



5

1. Diagnosis of Capacity of Human Resources

(5) Training Management

- Need to be strengthen the knowledge and skill on the Training Management.
- Need survey was important step to clarify the way how to identify the need and build an training program based on the need.
- Partnership and coordination with MoNE-TIKA is essential for the successful implementation of the training program.

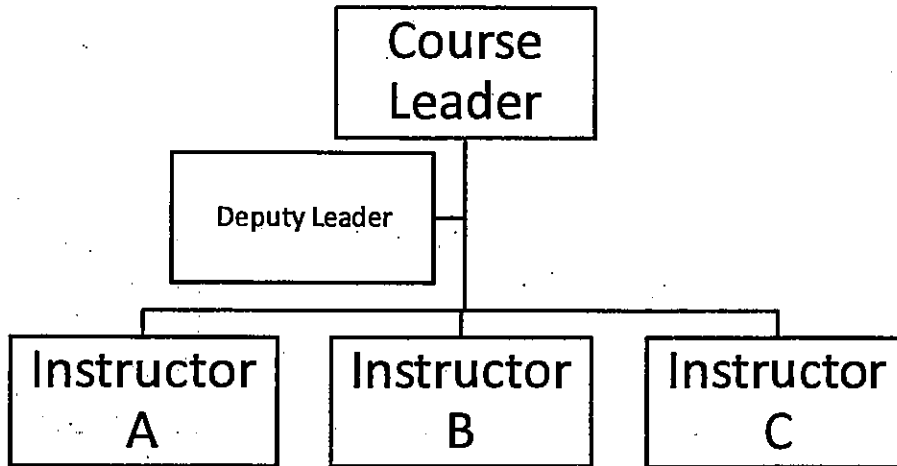


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2. Diagnosis of Organization

(1) Implementation Structure

- For each course should assign a course leader and a deputy leader.

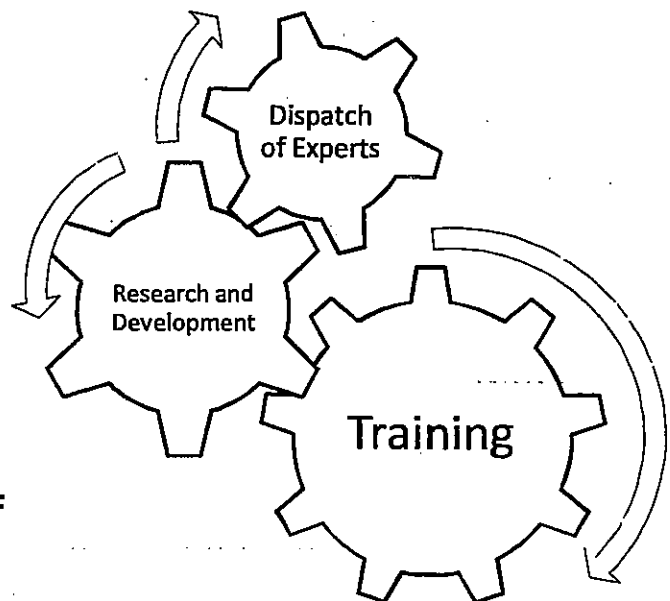


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2. Diagnosis of Organization

(2) Organizational Function

- Besides the Training, Research and Development function is essential
- In the near future, dispatch of the expert to gain experience on foreign country development could be beneficial for the CD of the Trainers.



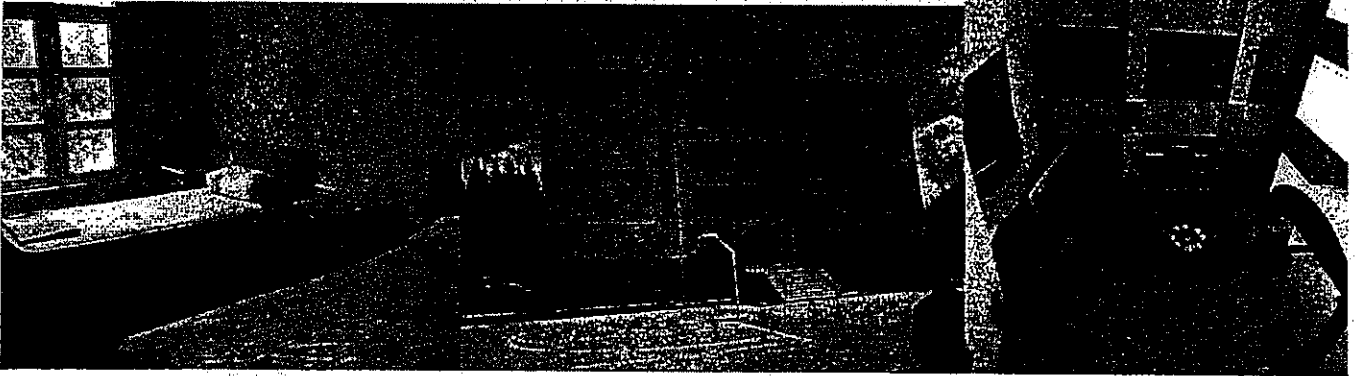
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2. Diagnosis of Organization

(3) Accommodation Facilities

- A building with 6 floor was build by MoNE
- Laundry service and a small kitchen for trainees is necessary.
- Small shop for daily goods, public telephone, clinic service is necessary.

(for detail see attached document)



2. Diagnosis of Organization

(3) Equipment and training resources

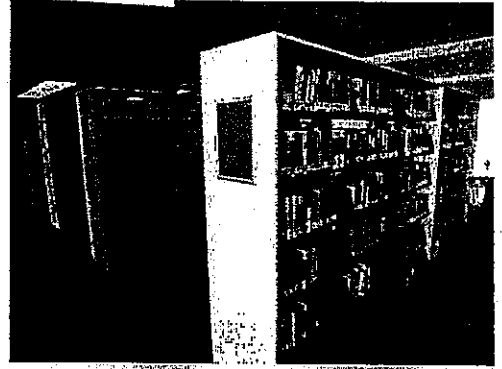
- Basic equipment for IAT are installed.
- PC and software are from 2006 and should be replaced (for detail see attached document).
- In the future more industry equipment should be introduced to train on the application of the IAT.
- Teaching aids for demonstration are temporary set by Shinko Sangyo of Japan, but based on the test usage, could consider the future purchasing of the equipment.



2. Diagnosis of Organization

(4) Learning Resource and Knowledge system

- A library with learning resource should be setup for the instructors and participants.
- Knowledge system should be set in order to accumulate and use effectively the experience gained from the activities.



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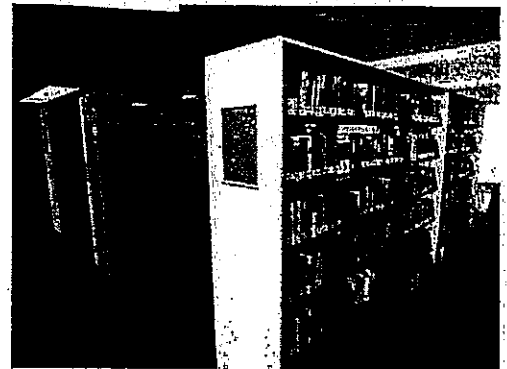
3. Institutional backup and System

(1) Policy and status of TTC

- MoNE should set the policy for the future goal of the TTC.
- Status of the TTC should be officialized.

(2) Cooperation among the stakeholders

- MoNE – TIKa coordination should be strengthening
- TIKa has reach network of the foreign coordination office, but the KM system should be strengthening.



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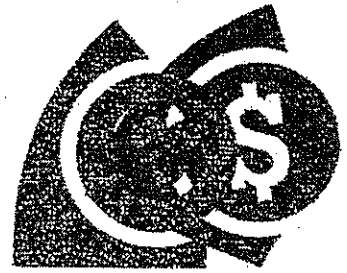
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3. Institutional backup and System

(3) Budget

- Need to officialize the staff and running cost of the TTC.
- Need to develop a sustainable operation plan of TTC.

(e.g. 70% of occupancy x 10 month/year)



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Proposing Counter measure to recover the delay of the assignment of the CPs.

- Backup by MoNE personnel for development of the content for administrators training on the TVE curriculum revision done in 2002.
- Training of TTC Counterparts on training module design for the new contents, event planning, presentation skill by outside lecturers.
- Production of the Media package for administrators training by outsourcing (Video, brochure and Panel).

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Request for TTC Facilities

Updated: June 17, 2012 version3

Trainees from different countries will come to TTC and stay for 3 to 4 weeks. In order to fulfill the basic necessity of the participants, following facilities are recommended to be improved.

1. Landry Facilities

- a. Need at least 6 Washing Machines for 5-8 kg cloths
- b. Need at least 6 Drying Machines for 5-8 kg cloths
- c. Space & Equipment for ironing (at least 6 irons and iron tables)
- d. Space & Facilities for Drying Clothes. It is recommended to make the space outside of emergency exit from the basement. For ladies, it is better to provide covers.

2. Kitchen & dining room

It is recommend preparing small kitchen and dining space for the trainees including following equipment:

- a. Gas stove for cooking
- b. Refrigerator
- c. Ventilation fan
- d. 4 dining tables and 16 chairs
- e. 2 Kitchen cabinet
- f. Cooking tools (pots, pans, plates, etc.)

3. Clinic

Is necessary to arrange periodic assignment of a health worker (Nurse) and a small clinic room where trainees who are not feeling well can be examine by nurse and take rest, including emergency treatment kit and basic medicines.

4. Small Shop for daily goods

A shop which provides daily goods such as soap, washing powder, stationary, snacks, beverages etc.

5. Internet room

It is necessary to set a room with at least 13 PCs. In addition, it is strongly recommended to improve internet connection in TTC.

6. Library

It is necessary to set a room for library with reference books and training materials in several languages (at least Turkish, English & Russian) must be provided.

7. Other Facilities

- a. At least need two public phone booth where can make international call.
- b. It is necessary to put drinking water server for the participants in the entrance hall.
- c. It is recommended to put desk in each room for self-studies.
- d. Need to repair video conference room.
- e. Need to repair seminar hall air-conditioning.

8. Other Recommendations

- o TTC facilities such as light, shower, bathrooms must be well maintained. It is strongly recommended to clean the water drainage system.
- o Has to be prepared information of usage of the TTC facilities and equipment as well basic guide for living in Turkey such as how to take bus, metro, use ATM machine, must be written in several languages. (At least Turkish, English & Russian)



- It is recommended to make agreement with outside laundry shop to get regular collection and delivery of the laundry.
- Floor cover of the laboratory should be replaced in order to protect the costly equipment.

9. Training Facilities

- Educational panels and exhibition box should be set to display the outputs of the projects.
- PCs of the laboratories are from 2006, several machines are out of order, the software is old version and should be replaced.



Cost Estimation for First Year (Overview)

This is the necessary budget for the Implementation of the first year of the training program

A. Ministry of Education

Subtotal

(1) Training Related	143.600
(2) Facilities Related	55.050
Total	198.650

B. TIKA

(1) Pakistan Training	68.210
(2) Kazakhstan Training	20.860
(3) Uzbekistan Training	
(4) Azerbaijan Training	7.210
(5) Group Training for 5 Countries	137.570
Total	233.850

C. JICA

(1) Pakistan Training	
(2) Kazakhstan Training	
(3) Uzbekistan Training	
(4) Azerbaijan Training	
(5) Group Training for 5 Countries	
Total	

General Cost for First Year Training

432.500

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Cost Estimation for First Year (Category Breakdown)

This is the necessary budget for the Implementation of the first year training program

A. Ministry of Education

(1) Training Related (Set up, repair, purchase, maintenance or replacements)

No.	Category	Subtotal	Purch.date	Remarks
1	IT Laboratory	22.200	30/08/12	
2	Control System Laboratory	22.000	30/08/12	
3	Motor System Laboratory	13.200	30/08/12	
4	Servo Motor System Laboratory	22.200	30/08/12	
5	Flexible Manufacturing System Laboratory	26.900	30/08/12	
6	Library	2.500	30/08/12	
7	Internet Facilities	5.000	30/08/12	
8	Printing Cost (Textbooks and Teaching Aids)	8.000	30/08/12	
9	Others (Laboratory floor covers, Furnitures)	19.200	30/08/12	
10	Antivirus Software	2.400	30/08/12	
Total		143.600		

(2) Facilities Related

No.	Category	Subtotal	Purch.date	Remarks
1	Repairment and maintenance of the facilities	3.000		
2	Laundry Room	10.500		
3	Kitchen and Dining	11.050		
4	Clinic	?		
5	Accomondation Facilities	-		
6	Reception area	26.000		
7	Recreation Facilities	4.500		
8	Others			
Total		55.050		

B. TIKA

(1) Pakistan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Expendables (Stationaries for the training)	960		
2	Expendables (Training kits)	63.000		
3	Translation of the Textbooks (English)	-		
4	Interpretation for the Training Program	-		
5	Excursion Cost	2.250		
6	Others	2.000		
Total		68.210		

(2) Kazakhstan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Expendables (Stationaries for the training)	960		
2	Expendables (Training kits)	-		
3	Translation of the Textbooks (Russian)	2.000		
4	Interpretation for the Training Program	13.650		
5	Excursion Cost	2.250		
6	Others	2.000		
Total		20.860		

(3) Uzbekistan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Expendables (Stationaries for the training)			
2	Expendables (Training kits)			
3	Translation of the Textbooks			
4	Interpretation for the Training Program			
5	Excursion Cost			
6	Others			
Total				

(4) Azerbaijan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Expendables (Stationaries for the training)	960		
2	Expendables (Training kits)	-		
3	Translation of the Textbooks	2.000		
4	Interpretation for the Training Program	-		
5	Excursion Cost	2.250		
6	Others	2.000		
Total		7.210		

(5) Group Training for 5 Countries

No.	Category	Subtotal	Purch.date	Remarks
1	Expendables (Stationaries for the training)	1.920		
2	Expendables (Training kits)	83.750		
3	Translation of the Textbooks (Russian,Arabic)	16.800		
4	Interpretation for the Training Program	54.600		
5	Excursion Cost	2.250		
6	Others	4.000		
Total		163.320		

(1) Pakistan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Flight Tickets			
2	Per diem			
3	Accommodation fee			
4	Insurance			
5	Others			
Total				

(2) Kazakhstan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Flight Tickets			
2	Per diem			
3	Accommodation fee			
4	Insurance			
5	Others			
Total				

(3) Uzbekistan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Flight Tickets			
2	Per diem			
3	Accommodation fee			
4	Insurance			
5	Others			
Total				

(4) Azerbaijan Training

No.	Category	Subtotal	Purch.date	Remarks
1	Flight Tickets			
2	Per diem			
3	Accommodation fee			
4	Insurance			
5	Others			
Total				

(5) Group Training for 5 Countries

No.	Category	Subtotal	Purch.date	Remarks
1	Flight Tickets			
2	Per diem			
3	Accommodation fee			
4	Insurance			
5	Others			
Total				





**MINUTES OF MEETING
OF
THE THIRD JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES (IATE)
IN THE REPUBLIC OF TURKEY**

Agreed upon between

Ministry of National Education,

Turkish Cooperation and Coordination Agency

and

Japan International Cooperation Agency

Ankara

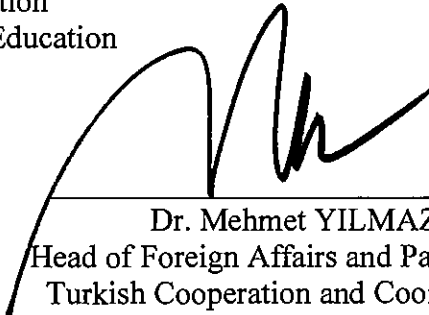
November 22, 2012



Mr. Yücel Yüksel
Head of Department,
General Directorate of Vocational and
Technical Education
Ministry of National Education



Dr. Takujiro Ito
Chief Advisor,
JICA Expert Team
IAT Extension Project



Dr. Mehmet YILMAZ
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

The Third Joint Coordinating Committee (hereinafter referred as the "JCC") Meeting on the "Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey" (hereinafter referred as "the Project") was held on November 22, 2012 in the meeting room of Vocational and Technical Education General Directorate-MoNE with the participation of Ministry of National Education (hereinafter referred as "MoNE"), Turkish Cooperation and Coordination Agency (hereinafter referred as "TIKA") and Japan International Cooperation Agency (hereinafter referred as "JICA") as well as Japanese Expert Team and Turkish Staff of Teacher Training Center (hereinafter referred as "TTC") (Participant List, refer to Annex 1).

The results of discussions which were followed by the participants along the agenda (refer to Annex 2) have been summarized as follows:

1. Explanation of the Agenda

Mr. Yücel YÜKSEL firstly conveyed the greetings of Mr. Ömer AÇIKGÖZ, Director General of TVE-MoNE, to all participants and expressed that Ms. Şennur ÇETİN, acting as Director General, will be the chairman of JCC.

Then, he delivered the agenda to be followed (refer to Annex 2).

2. Opening Remarks

(1) Opening Remarks by Ms. Şennur ÇETİN

Ms. ÇETİN addressed below points, on behalf of GD of TVE:

- Although I couldn't join the previous meetings of IATE Project and also opening ceremony of the training courses at TTC, I am always trying to follow the progress of activities by getting information from Mr. Yücel YÜKSEL.
- Today, we would like to evaluate the results of completed three training courses from positive and negative aspects in order to plan the necessary improvements for the next training courses.
- It has been known that the related organizations of this project have many successful studies in past years. And, we believe that this project will be much more successful, based on our experiences from the previous projects, especially on teachers training.

(2) Opening Remarks by Mr. TAKADA

Mr. TAKADA addressed below points, on behalf of JICA Turkey Office:

- Since I have been involved from the previous project (SPREAD Project) and also from the formulation of the current project (IATE Project), I am very pleased to see the completion of first training programs successfully.
- JICA has a long history of the cooperation with MoNE, especially on the field of technical and vocational training. And now, we are conducting the next step of our cooperation in a partnership to support the neighboring countries.
- We are also very much pleased with the involvement of TIKA to our cooperation and appreciated for their effort.
- Although the training courses of first three groups have been completed successfully, it has been understood that there are some challenges to be solved or to be improved for the next training programs.
- So, we hope today's meeting will be beneficial for all the relevant officials in order to solve the possible challenges for the next training programs.
- Finally, we, as JICA, really appreciate TTC counterparts for their hard effort for the successful implementation of first training courses.

(3) Opening Remarks by Ms. Ayşe ÖRÜN

Ms. ÖRÜN addressed below points, on behalf of TIKA:

- As known, first three training courses of IATE Project have been completed successfully through the hard effort of Mazhar Zorlu School and TTC staffs.
- Since I could join the opening and closing ceremonies of the training courses in Izmir, I had an impression that the project will be able to progress very successfully due to the

participation of very high rank managers of TVE, especially from Pakistan and Kazakhstan.

- Of course, some problems were faced during the training period. But, we believe that those problems will be overcome through the necessary discussions between the related parties for achieving better results.

3. Presentations of the Results of 3 Courses Implementations

(1) Overall presentation by Mr. Hamit DOĞAN

Mr. DOĞAN made an overall evaluation of the conducted training programs, as below:

- TTC and conference hall were prepared for the training programs in a very short time and in very restricted conditions. As a self-criticism, we are not fully satisfied with the preparations, but we believe we did our best with the existing conditions.
- But, it was very satisfactory for us that all the impressions of our guests from target countries were very positive at the end of the training period.
- Now, TTC knows what those countries need to be taught in further training courses and also the countries know what they need for establishing IAT department in their countries and what their teachers will learn here.
- Kazakhstan, Kyrgyzstan and Azerbaijan proposed us to be sister school. We, of course, didn't refuse, but kindly requested them to convey this proposal officially through the Foreign Affairs of our Ministry.
- Mazhar Zorlu School is always ready to conduct any project studies, because TTC has a very successful team with very hard working lecturers, trusting and believing each other.

(2) Report of Executive Program by Mr. Murat ÖZDEVECİ

- Mr. ÖZDEVECİ made a short introduction on general structure of training program (refer to Annex-3).
- Regarding the classification of target countries as "country focus training" and "group training", Ms. ÇETİN asked the criteria, used for classifying the countries in two categories.
- Mr. ÖZDEVECİ replied that classification is made based on the conducted need survey studies in target countries. The countries Pakistan, Kazakhstan and Azerbaijan, having a certain level of IAT and related fields' education, have been included in country focus training for upgrading their level, and the other countries Kyrgyzstan, Afghanistan, Turkmenistan, Palestine and Tajikistan, which have not been introduced with IAT, were classified as group training for providing an awareness of IAT and supporting them to introduce this field in their countries.
- In the meantime, Mr. İTO gave more detailed information about the classification. He stated that Pakistan is already conducting IAT education on a certain level with their existing curriculum and equipment. They just need to be upgraded. Then, he added that Kazakhstan and Azerbaijan are planning to introduce IAT departments, but they don't have curriculum and equipment.
- That's why; MoNE, TIKa and JICA jointly decided to invite only the TVE principals and directors of principals from those countries for the first year, in order to make them aware of importance and advantageous of IAT and also ask them to prepare a pilot action plan for introducing IAT departments in their schools.
- Based on the pilot action plan, they will request their government to procure the necessary equipment and get authorization for introducing new curriculum into their school.

(3) Report of Country Focus Training for TVE Managers by Mr. Gürcan BILDIR

- Mr. Gürcan BILDIR stated that 8 managers from Kazakhstan and 7 managers from Azerbaijan participated to this training program.
- Then, he presented the results of country focus training for TVE managers, by explaining the objective and methodology of training program (see Annex 3).

- Mr. BILDIR expressed that participants prepared the first version of their action plan for establishing IAT department in their school. This action plan will be improved to second version by the country until December 2012 and discussed with TTC through Web Based Training Support System (WBTSS) for finalizing.
- As reply to the question by Ms. ÇETİN regarding the starting of pilot project implementation in target countries, Mr. Emin ÖZDAMAR stated that the countries will select the pilot schools and teachers until the next training program in TTC. Then, the pilot project implementation will start by sending the selected teachers to TTC for technical training.
- Mr. ITO explained the case in Kazakhstan in detail:
 - Kazakhstan is planning to select 68 TVE schools and allocate 360 thousand Euros to each school from their World Bank Loan, in order to renovate those schools.
 - Since the pilot program for teaching IAT needs only 100 thousand Euros for one school, Kazakhstan expressed that they can easily select 4 pilot schools and 12 teacher candidates within 2 weeks after returning from TTC to their country.
 - As a summary for Kazakhstan, there is strong support from their Ministry side in order to conduct this pilot program.
 - In accordance with the schedule, prepared by Ms. Bekzade MUKHANOVA, Deputy GD of TVE, and Mr. ITO during the training program in TTC, selected master trainers will be sent to TTC for training in June 2013, 2 months before the starting of new academic year in September 2013.
 - Those master trainers will make the planning of curriculum and contents. Then, they will start the implementation of pilot program in selected pilot schools as of September 2013.
 - Kazakhstan will select the pilot schools according to the strategy of different areas of the country. Those selected pilot schools will be the model for extending IAT field to the other schools in Kazakhstan.
 - In the meantime, Ms. ÇETİN advised project team to give the necessary criteria to the target countries for selecting the correct pilot schools as well as the master trainers, to be trained in TTC.
 - Mr. ITO stated that Kazakhstan was ready to pay for the training costs in TTC. But, since the training costs for the pilot schools will be paid by the project during the project period, Mr. ITO proposed Mr. BORIBEKOV to be sponsor to the other schools, other than the pilot schools in Kazakhstan for sending their teachers for training in TTC.
 - Then, Mr. ITO asked MoNE if it is possible to accept additional participants to TTC for training. Ms. ÇETİN replied that if the country to be given training pay all the training costs, TVE GD of MoNE is always open to accept trainees not only from Kazakhstan but also from other countries on IAT or any other fields, in order to give technical training in TTC and also in other vocational schools and training centers in Turkey.
 - Mr. ITO pointed out that Kazakhstan will be most probably the most successful target country in the project as a good model for the other countries. They have budget for the procurement of all necessary equipment, but their only problem is they don't have expert for selecting the correct equipment, installing and putting into operation in the pilot school laboratories. Then, he asked Turkish side the possibility of sending expert from Turkey to Kazakhstan.
 - Ms. ÇETİN replied that it is possible to send expert from Turkey to other countries, only in case of charging all the costs of expert by the inviting country. ✓
 - Then, Mr. ITO asked TIKa the possibility of covering the costs of Turkish expert in case of dispatching to Kazakhstan. Ms. Ayşe ÖRÜN replied that TIKa is dispatching Turkish experts to other countries, and added that she will search the similar implementations in past times, and share the results with project team later. ✓

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(4) Report of Group Training Program for TVE Managers by Mr. İsmail AKTAŞ

Mr. İsmail AKTAŞ presented this training program by explaining the objectives of the training and used methodology and evaluation (see Annex-3). Here below are other discussions on this topic:

- This training program was conducted for 2 TVE managers from Kyrgyzstan, Tajikistan, Afghanistan and Palestine, total 8 participants for 2 weeks.
- The difference of this program from country focus training is that different participants will be accepted from each group training country every year.
- Since need survey has not been conducted in group training countries, we have no information about the structure of vocational training and IAT education. Therefore, those countries will be given basic level IAT training.
- Before coming to Turkey, participants were asked to prepare a country report on certain topics, defined in GI forms. But, most of them came without their country report.
- Therefore, in first week of training program, a workshop has been organized in order to ask them to prepare their country report.
- At the end of the training, participants identified their training needs. When they return to their countries, they will prepare a proposal for their government until the end of December 2012.
- Ms. ÇETİN pointed out that the group training countries should prepare more detailed country report after returning to their countries and added that this report should be sent to TTC before the next group training program, in order to compare with the first version of report, prepared in TTC, and make the necessary modifications on training program based on latest version country report.
- Mr. AKTAŞ stated that from 2 teachers, to be sent to TTC for technical training, one teacher should be from electronics field and the other should be from mechanical field. Then, he kindly requested MoNE and TIKA authorities to put the specific field of teachers as a compulsory condition for the countries. ✓

After the results of training courses presented by TTC lecturers, Mr. YÜKSEL summarized the topic as below:

- Depending on the results' evaluations, the expected outputs from the first three training courses were achieved.
- For the further technical training courses of master trainers, the countries will be strongly requested to select one teacher from electricity field and the other from mechanical field, by explaining the importance of this condition related with the efficiency of the training. But, most probably, it will be difficult to find the specified teachers especially in Afghanistan and Palestine.
- As a result, 3 three training courses were completed very successfully with the hard effort of TTC lecturers, who have big experiences from the previous projects on IAT field.

Then, Ms. ÇETİN confirmed the success of completed training courses and added that;

- The next training courses need to be more successful in order to be a good model for Turkey.
- Because, the main aim of MoNE is to make TTC an international training center, to be used not only for IAT field trainings but also for international training courses on other fields.
- In this sense, the results of training courses of IATE project have big importance, as the first step of being international training center.

Mr. ITO asked when the deadline is for finalizing the reports of completed training courses. Mr. YÜKSEL replied that the course reports of first three courses need to be finalized until December 28, 2012. And, the results of overall evaluation forms should be attached to the reports. For the Pakistan training to be conducted in December 2012, the course report should be submitted until January 31, 2013.

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Then, related with the financial reporting, Mr. ÖZDAMAR stated that, since the total budget for first 4 training courses, including December course for Pakistan, was already transferred to TTC, 4 financial reports of 4 courses can be submitted to JICA altogether until January 31, 2013. If TTC can complete some of the financial reports of first 3 courses before this date, they can submit the completed ones in advance. So that, there will be some time for making needed corrections on the reports in order to confirm the reporting system mutually. But, the deadline for all 4 financial reports will be January 31, 2013.

4. Discussion on the Lesson Learned from the First 3 Courses

Mr. ITO stated that, since the lesson learned sheet has been just filled up by JICA, Japanese experts and TTC Lecturers, and still on preparation by MoNE and TIKA, the comments and suggestions has not been compiled yet. Therefore, it will be better to discuss only the main three topics in this meeting due to the time restriction. Then, after compiling the sheets, the results will be added to the course reports.

(1) Selection of Candidates

Mr. ITO stated below points for this topic:

- Although all the preparations for the first year training courses were done in very short time, all the parties put their best effort in current conditions.
- With hard effort by TIKA offices in countries, we could get enough number of candidates for selecting the most appropriate trainees.
- But, there are still some topics to be discussed for improving the situation.

Then, Mr. YÜKSEL expressed that;

- For the next training courses, firstly GI forms need to be revised for improving the conditions.
- TIKA offices in countries should be requested to check the appropriateness of the conditions, especially the names of candidates on application forms, before sending to TIKA Ankara office. ✓

Mr. ÖZDAMAR added that;

- This year, the selection of candidates couldn't be done on time, since some of the application forms were received after due date and some of them were received with many missing information.
- In order to prevent this kind of problems, the best way is to give the responsibility of application forms to one institution. This institution will collect all the application forms and check the appropriateness of the conditions. After receiving all the acceptable applications, that institution will distribute the completed file of application forms to the other related institutions for selection.
- TIKA offices should announce a deadline for the submission of application forms in the countries. Then, the submitted forms should be checked by TIKA local staffs in accordance with a check list. If some conditions or some necessary documents are missing, candidates are asked to complete the missing items until the deadline. Then, the completed application forms should be sent to the assigned institution in Turkey altogether as a whole file. ✓

In addition to the above comments and suggestions, Mr. ITO proposed to use project web based follow up system (WBTSS) as online application. According to his proposal, the candidate will fill up the application form on WBTSS as digital. When the form is sent to printer for getting the print out in order to put the authorized signature and stamp, the form will be sent to TTC automatically. This digital copy of the form will not be accepted as valid until receiving the authorized copy.

Mr. ITO additionally proposed that when the file of application forms is received from TIKA offices, this file should be firstly sent to TTC through Mazhar Zorlu School principal for. ✓

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checking the appropriateness of technical conditions. TTC team will prepare the excel sheet of the candidates and put the technical comments and observations. It will not be the selection, just giving the recommendations from technical point of view. Then, the forms will be sent to MoNE for selection by taking also those technical recommendations into consideration.

The members of JCC found those proposals logical and jointly decided to discuss on this matter in more details later, in order to create an efficient system, which will reduce the mistakes and delays to the minimum level.

(2) Course Content and Methodology

Mr. ITO stated that since there are several issues to be discussed for the improvement of next training courses, it is probably better to ask TTC lecturers what kind of difficulties they had and which issues need to be consulted with JCC members. Here below are the statements by TTC lecturers and related discussions by JCC members:

Regarding Age and Health:

- Mr. Gürcan BILDIR stated that, since the first three training courses were conducted for the managers, the participants' ages were about 50 and more. So, some health problems, such as high blood pressure, were occurred.
- Then, Mr. Emin ÖZDAMAR expressed that, although the health problems are asked to the candidates and age limitation is put on GI forms as the compulsory conditions, most of the candidates were not appropriate to the conditions.
- He added that since it was the first training program, selection was made little flexible only for this time, in order not to refuse the applications.
- Then, for the further training courses, JCC members agreed on making candidate selections by considering the GI conditions more strictly. The most important criteria to be strictly followed in selection will be the deadline and age limit. The other necessary criteria, like the background field, will be discussed and fixed by the members through the further internal meetings. But, before the selection of candidates to be made by JCC members, TIKA offices should firstly check the applications more carefully, and if some conditions are not in between the acceptable interval, application should not be accepted by TIKA offices without sending to Turkey for selection.
- Regarding the medical case, Mr. ITO mentioned about his previous training experiences in JICA International Training Center by giving some drastic examples and suggested that some countermeasures have to be set for preventing serious health problems. Then, he proposed to ask the candidates submitting a medical report before coming to Turkey. And as the next step, after the coming of participants to Turkey, he proposed to make a first aid kit, including blood pressure measurement, thermometer, ban-aid, alcohol, etc. available in TTC. Because, the training program shouldn't be interrupted by taking the participants to hospital for some simple health problems. But, on the other hand, if the training program is longer than 2 weeks, many health problems may occur because of stress of living in a foreign country or eating different kind of foods, etc. In JICA Training courses, a medical coordinator is taking care of participants' health and taking them to hospital if necessary. In case of TTC, Mr. ITO asked the possibility to make an agreement with a nurse for calling to TTC and consulting what to do in case of a health problem of the participants.
- Then, he was replied that, since the clear medical report is very easy to get and not trustable, it is better to accept the statement of candidates about their health condition on application forms, and give all the responsibility to them in case of any problem regarding to their any chronic disease. First aid kit was confirmed to make available in TTC. Then, it is stated that agreement with a nurse is not possible. But, instead of this, another option is to assign a nurse teacher from a health vocational high school in Izmir to take care of participants' health problems. If necessary, she can take the participant to hospital for the medical treatment.
- In the meantime, Mr. TAKADA suggested that, GI form should definitely notify that the health condition has to be stated on application form by the participants clearly and

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honestly, otherwise all the responsibility will be owned by the participant. But, even though the statement on application form is healthy, if any serious health problem has been recognized during the training, the participant should be sent back to the home country regardless to his/her request, in order not to take any risk on participant's health. However, if the participant honestly states the health condition, but has some problem during the training, of course the project will take care and take to the hospital if needed.

Regarding Translation

- Mr. İsmail AKTAŞ stated that 3 languages, English, Russian and Turkish were used in group training course, which caused confusion in lectures as well as in field observation tours. Then, he proposed to organize one course of total 2 group training courses in a year in English and the other course in Russian by classifying the countries depending on their languages. Namely, training will be in Russian language for Turkmenistan, Kyrgyzstan and Tajikistan, and in English for Afghanistan and Palestine.
- This proposal was found very effective by JCC members in order to prevent the confusion and make the training more efficient. Then, it was agreed to work on re-organizing the group training courses based on this idea and put into implementation starting from the first technical training course in April 2013.
- Consequently, there will be total 5 group training courses until the end of project period. 2 of them will be in Russian and 2 of them will be in English. And, last one can be combined. At the end, the total number of participants to be trained will be same.
- Another problem regarding the translation was informed by Mr. ITO. As he stated, the interpreters were available only during the training courses, but at the end of the training, many documents, like questionnaires, evaluation sheets, filled up by the participants, are in Russian and need to be translated to Turkish in order to evaluate the completed training program and make the needed improvements for the further training courses.
- Ms. Ayşe ÖRÜN replied that if all the documents in Russian language are sent to TİKA, they can be translated through contracted translation company.
- Another proposal from TTC lecturers regarding this matter was to assign one of the Russian language interpreters, to make also the translation of written documents at the moment. For example, lecturers apply pre-test and post-test for every lecture. If those tests can be translated by the assigned interpreter soon after the lecture, lecturer will be able to understand and evaluate the tests in order to design the next lecture.
- Then, Ms. Şennur ÇETİN replied that if the needed job description of the interpreter is informed to TİKA as a written document, TİKA can make contract with one of the interpreters based on this condition. So, from two Russian language interpreters, one will be responsible only for the verbal interpretation, the other will be responsible both for verbal interpretation and written translations.

After above discussions, Mr. Murat ÖZDEVECİ proposed to have a meeting other than JCC few weeks before each training course. So that, in this meeting with the participations of all parties' representatives, the training preparations can be checked once more, and the necessary requests or suggestions can be given directly without losing time with indirect communications. Then, it was jointly agreed to have a practical meeting few weeks before every training courses. Since Pakistan training is very close, there is no need to have a practical meeting for that. Another practical meeting will be held few weeks before the training of April 2013.

5. Discussion on the Draft PO (Plan of Operation) for 2nd Year

(1) Tentative Schedule for the 2nd Year Training Program

Mr. ITO stated that the previous version of 2nd year schedule was changed for several courses. For example, Kazakhstan requested to have their next training course in June 2013. Then, as the result of discussions between TTC lecturers and Japanese experts, by taking the special requests of the countries into consideration, 2nd version of training schedule for 2nd year was prepared tentatively. Mr. Murat ÖZDEVECİ explained this schedule to JCC members (refer to Annex-4). Here below are some important points from his explanation:

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- In 1st version of schedule, technical training of next year for Kazakhstan and Azerbaijan was planned for 3 weeks. But, depending on the IAT training curriculum, TTC is now proposing to invite participants from each of those countries for 4 weeks only for next year. Last year training will be for 3 weeks, as planned before.
- As explained by Mr. ITO, the original training program for IAT trainers is for total 6 months for in-service-training in Turkey. For IATE Project, in 3 years, if the training course of each year is conducted for 3 weeks, it will be very difficult to cover many subjects, needed to be given, in total 9 weeks. Therefore, project team worked on developing a new training program, including basic, intermediate and advanced level training as well as training methodology, with the help of some advisors from Japan. Project team tried to fit this program as much as possible, but at least 4 weeks training is necessary for the first year.
- Another point, which needs to be clarified in this meeting, is Uzbekistan. Since the need survey was not conducted in this country, there is not enough data to identify their level and needs on IAT field. Therefore, TTC proposed to include Uzbekistan into group training. Uzbekistan training has been already included in 2nd version of schedule as country focus training. If it is confirmed by JCC members to include this country to group training, the schedule will be changed for putting into implementation. JCC members jointly agreed on including Uzbekistan into Russian language group of group training courses. So, TIKA Office in Uzbekistan will be informed about this decision and ask to conduct the procedure of distributing GI forms and receiving applications for next group training program.
- The only problem on scheduling is related with the last 2 group training courses in 2015. As shown in schedule (Annex-4), last 2 group training courses will have to be given very close to each other without giving some time in-between.
- Mr. Emin ÖZDAMAR replied that the schedule of group training courses may cause some budgetary problems from JICA side. As he explained, JICA has to close all the accounts until March 15 of every year. Then, new budget can be given earliest around April 10. Based on this situation;
 - ✓ For the 1st and 3rd group trainings in April 2013 and April 2014 respectively, the budget will be given by JICA around April 10, after starting of training. So, the services procured for the training will have to be paid little late. It can be managed, but the payment of per diem to the participants cannot be delayed. In this case, Turkish side can use from their own source until getting budget from JICA.
 - ✓ For 2nd group training in February 2014, the financial reporting has to be finalized and submitted to JICA within 15 days after the completion of training course. It may be difficult for TTC.
 - ✓ For 4th and 5th group training courses in 2015, the schedule makes problem for JICA for closing all the accounts of project. Therefore, last two courses should be taken to earlier dates. It means, the 5th group training course should be completed until the beginning of March 2015 in order to be able to get the financial reports until March 15.
- Then, project team was kindly requested to revise the schedule by considering the earliest starting date of a course as the middle of April, and latest completion date of a course as the end of February.

(2) Target Countries and Number of Participants for 2nd Year

Here below is the summary of discussions regarding this topic:

- As confirmed by JCC members, Uzbekistan will be included into group training with total 10 participants, same as the other group training countries. With Uzbekistan, the number of group training countries will become total 6.
- It is officially certain that there will be total 5 training courses until the end of project period. From 5 courses, the number of English language courses and Russian language courses will be decided (e.g. 3 courses in Russian + 2 courses in English).

- Then, the total participant number of countries in Russian group and in English group will be divided to number of courses in related language group. At the end, the targeted participant number will be the same. Here, the important point is the grouping the participants.
- Based on above discussions, Mr. ITO stated that, since the participant numbers of the groups will be increased with the addition of Uzbekistan, the equipment configuration needs to be considered for the group works of the practices.
- Lecturers expressed that, based on the revised training program for basic, intermediate and advance level IAT training, some equipment needs have emerged for TTC. Most probably 3 additional sets will be needed, but the certain information will be conveyed to the authorities after working on this matter in more detail.
- Mr. Emin ÖZDAMAR proposed to share the needed budget for the procurement of additional equipment to TTC by 3 parties of this project.
- Ms. Ayşe ÖRÜN stated that, in accordance with the procurement rules of TİKA, there is a financial limit for equipment procurement for each year, and the limit of this year is already full. She added it can be possible only for next year budget. ✓
- For JICA side, Mr. TAKADA stated that the official agreement (R&D) of this project doesn't include any equipment provision. If JICA accepts providing equipment, official agreement (R&D) needs to be modified first. Because, JICA has flexibility to modify R&D, if new needs are recognized by both parties. Of course, project purpose, outputs or overall goal cannot be changed, but inputs can be modified. Then, Turkish side can submit the application of equipment provision to JICA. As he stated, the more difficult point is to create a new budget line for equipment procurement. If the total amount of additional equipment can be compensated within the current JICA budget, it can be possible to use some amount from another line of budget in case of modification of R&D.
- Since the additional equipment sets are not needed for December training, and need to be procured by the end of March 2013, all parties will work on the possibilities and decide how to organize the procurement by further discussions.

(3) JCC Schedule

Mr. ITO kindly asked JCC members to confirm the date of next JCC meeting. He also reminded that the modification of PDM indicators was decided to be discussed in 3rd JCC. But, since 3rd JCC agenda was intensively majored on evaluation of completed training program, PDM indicators couldn't be included in agenda. Then, he proposed to discuss this topic in next JCC.

JCC members agreed on holding next JCC in May 2013, soon after the completion of group training in April and before the starting of country focus training in June. So that, it will be possible to evaluate the completed training course and check the preparations of next training course by JCC members. Also, the modification of PDM indicators was confirmed to be discussed in next JCC in May. Certain date and agenda will be decided through informal communication between the parties.

(4) Additional Activities proposed by Project Team

- Based on the evaluations of completed training program among TTC team members, Mr. Hamit DOĞAN kindly requested JICA to send a short term expert to TTC in order to transfer the latest technological developments on IAT to the lecturers.
- Mr. Murat ÖZDEVECİ added that if the short term technical experts can be sent specifically on the subjects of "MES-Manufacturing Execution System" and "ERP-Enterprise Resource Planning", it will be beneficial for TTC to catch the advanced technology, currently used at industry. He also kindly asked JICA to send one more expert on "Instructional Design" in order to improve the teaching methodology of TTC training courses.

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- Regarding above requests from JICA, Mr. TAKADA replied that, first of all, the framework of this project needs to be considered based on the official agreement, signed between JICA, MoNE and TIKA.
- As known, for dispatching short term experts, official request application form, called A1 form, should be sent from Turkish government to Japanese government.
- To do that, the needed fields for the short term experts need to be checked if those fields are already included in the current expert request form, or not.
- If not included, additional application needs to be done for needed experts by Turkish government.
- At the next step after official request, the discussions are held between JICA and the consultant company of the project on the possibility of providing those short term experts within the contacted amount of project budget.
- Then, Mr. TAKADA kindly requested TTC to inform the fields and dispatching times of short term experts to Mr. ITO. After getting those details, Mr. Emin ÖZDAMAR will confirm the current A1 form includes those fields or not.

Mr. YÜKSEL expressed his gratitude to Mr. TAKADA because of his positive approach to the requests for expert dispatch. Because, as known by all sides, additional expert or equipment provision requests were not included in official agreement (Record of Discussions) and could be rejected by JICA directly. But, instead of rejecting, Mr. TAKADA explained the way of making application for additional request.

Then, Mr. YÜKSEL stated that the Turkish side will take the necessary official procedures for submitting above mentioned request to JICA.

6. Others

Mr. Emin ÖZDAMAR stated that, based on his long year-experiences in similar JICA training programs, the number of lecturers is not enough in TTC. Only 5 people try to carry out all kind of works, including making organizations, carrying official procedures, keeping financial matter, etc., as additional to giving training. Then, he asked MoNE to support TTC with at least 2 additional staffs, having same level qualifications, one for managerial works and one for working as a lecturer.

Mr. ÖZDAMAR also expressed that even though the lecturers loose some of their payment rights with their assignment to TTC as a lecturer, they keep working so willingly for achieving the best results. Then, he kindly requested MoNE to make some improvements on lecturers' rights, in order to implement much more efficient training programs in parallel with increasing their motivation. Because, the common aim of all parties is to make TTC an international training center. And, it is mostly based on the human resource of this center.

As reply to above request, Mr. YÜKSEL firstly confirmed that TTC lecturers are getting lower monthly income than the other technical teachers, giving lectures to the high school students. But, on the other hand, in accordance with the current system, TTC has no legal status as a training center, only the dormitory of Mazhar Zorlu School. This matter has been already conveyed to the Director General. But, since the General Directorate is still in re-structuring studies, no study has been started yet. The problem is that, if TTC is given a status of a training center, it may need to be transferred to In-Service-Training GD, means new manager and new teachers will be assigned as TTC personnel. And, TVE GD can use TTC only by asking official approval to other GD. Since TVE GD aims not to lose TTC, some ways are being searched now for improving its status by keeping this institution in our body.

Regarding additional personnel assignment to TTC, İzmir Governorship has been given authority to assign teachers to TTC. So, the principal can request Governorship and Provincial National Education Directorate to assign new teachers to TTC. This matter will be discussed with principal through internal communications later.

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7. Wrap-Up and Closing

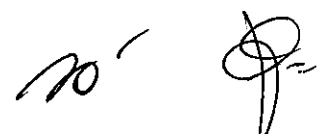
Mr. YÜKSEL summarized the meeting as below:

- (1) As an overall result, the first 3 group-training programs were completed successfully.
- (2) GI forms and application forms will be reviewed and revised, for more effective implementation of the application procedures of further training programs.
- (3) Next years' training programs will be scheduled again, depending on the financial reporting information given by JICA.
- (4) Translation problem will be solved by dividing the group training countries into two groups, as English language group and Russian language group. Those groups will be taken to different training programs. The participant number of each group will be defined by TTC.
- (5) With including Uzbekistan to group training, the number of groups is increased, and then additional equipment needs have been emerged. The list of needed equipment will be informed with their costs by TTC. And, MoNE and TIKa will work on organizing the procurement through further discussions.
- (6) JICA will also study on the possibility of supporting equipment provision. If there is possibility, Turkish side will take the necessary official procedures for application.
- (7) For two Japanese experts' requests, one technical expert and one Instructional Design Expert, from JICA, firstly the details of the fields will be informed by TTC, and then the possible official ways will be searched by both parties.
- (8) Next JCC meeting will be held after May 15, 2013. The certain date will be decided through informal communication between the parties. Modification of PDM indicators will be included into next JCC agenda.

Then, Mr. TAKADA stated that he completely agrees with the summary, made by Mr. YÜKSEL and added below points.

- (1) Although there were some challenges during the training, JICA is very satisfied with the completed training program.
- (2) Compared with JICA training programs in Japan, the result is very much successful and acceptable. That's why, on behalf of JICA, I would like to congratulate TTC lecturers and all other related staffs for their hard effort.
- (3) There are several inputs for implementing this project; one is the facility, the other is curriculum, and the most important one is human resource, means lecturers. So that, JICA is very much appreciated to the initiative of MoNE to secure the qualified lecturers to implement this project.

Ms. Ayşe ÖRÜN also confirmed the success of completed training program and expressed that she agrees with all the statements as the sum up of meeting. As she said, from TIKa side, only a small difficulty was experienced regarding the sharing of budget. The costs of laboratory equipment were not defined on equipment list. If TIKa can have a prediction of the costs, there will be no other difficulty for the further training programs.



Attendance List for 3rd JCC Meeting**JCC Members, Turkish side**

22/11/2012

No.	Name	Position	Institution
1	Ms. Şennur ÇETİN	Head of Group	GD of Vocational and Technical Education, MoN
2	Mr. Yücel YÜKSEL	Head of Department	GD of Vocational and Technical Education, MoN
3	Ms. Ayşe ÖRÜN	Senior Expert	Turkish Cooperation and Coordination Agency
4	Mr. Ahmet DAŞTAN	Expert	Turkish Cooperation and Coordination Agency
5	Mr. Mehmet YAZAR	Expert Teacher	GD of Vocational and Technical Education, MoNE
6	Mr. Feyzullah ÇİFTÇİ	Teacher of Turkish Language and Literature	GD of Human Resources
7	Ms. Ayşe Nurdan GEZER	Expert	GD of European Union and Foreign Relationships
8	Mr. Hamit DOĞAN	Principal	Mazhar Zorlu Technical and Vocational High Sch
9	Mr. Murat ÖZDEVECİ	Chief of TTC	Mazhar Zorlu Technical and Vocational High School
10	Mr. Gürcan BILDIR	TTC Lecturer	Mazhar Zorlu Technical and Vocational High School
11	Mr. İsmail AKTAŞ	TTC Lecturer	Mazhar Zorlu Technical and Vocational High School

JCC Members, Japanese Side

No.	Name	Position	Institution
1	Mr. Hiroyuki TAKADA	Senior Representative	JICA Turkey Office
2	Ms. Miyuki KONNAI	Project Formulation Advisor	JICA Turkey Office
3	Mr. Emin ÖZDAMAR	Senior Program Officer	JICA Turkey Office
4	Mr. Takujiro ITO	Project Chief Advisor	JICA IATE Project Expert Team
5	Ms. Neslihan BILDIR	Project Assistant	JICA IATE Project Expert Team

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Industrial Automation Technology Extension Project for Central Asian and Middle East Countries

MoNE-TIKA-JICA Cooperation Project
Mazhar Zorlu Technical and Industry Vocational High School Teacher Training Center
Mevlana Mah. 1776 Sok. No: 2/2 Bornova - IZMIR TURKEY
Tel & Fax: +90 232 342 7043



Ministry of National Education
Republic of Turkey

The Industrial Automation Technology Extension Project
For Central Asian / Middle East Countries

The Third Joint Coordinating Committee Meeting

Agenda of the Meeting (Draft)

Date : November 22, 2012 (Thursday)
Time : 14:30 – 17:00
Venue : Meeting Room of General Directorate of Technical and Vocational Education, MoNE

Program:

1. Explanation of the Agenda by Mr. Yücel YÜKSEL
2. Opening Remarks
 - (1) Ms. Şennur ÇETİN – Head of Group, Social Partners and Projects, MoNE
 - (2) Mr. Hiroyuki TAKADA, Senior Representative, JICA
 - (3) Ms. Ayşe ÖRÜN, Senior Expert, TIKA
3. Presentation of the Results of 3 Courses Implementation
 - (1) Overall presentation by Mr. Hamit DOĞAN
 - (2) Executive Managers Program by Mr. Murat ÖZDEVECİ
 - (3) Country Focus Program for Azerbaijan and Kazakhstan TVE Managers by Mr. Gürcan BILDIR
 - (4) Group Training Program for TVE Manager by Mr. İsmail AKTAŞ
4. Discussion on the Lesson Learned from 3 Courses
 - (1) Selection of the Candidates
 - (2) Course Content and Methodology (including training program, field observation tours, action plan workshop, presentation workshop, translation/interpretation, evaluation method and the others)
 - (3) Welfare and Services (accommodation, health, transportation, etc.)
5. Discussion on the Draft PO (Plan of Operation) for 2nd Year
 - (1) Tentative Schedule for the 2nd Year Training Program (Mr. Murat ÖZDEVECİ)
 - (2) Target Countries and Number of the Participants for 2nd Year (Mr. Murat ÖZDEVECİ)
 - (3) JCC Schedule (Mr. ITO)
 - (4) Additional Activities Proposed by the Project Team (Mr. ITO)
6. Other Topics if Necessary, Upon the Proposition of JCC Members

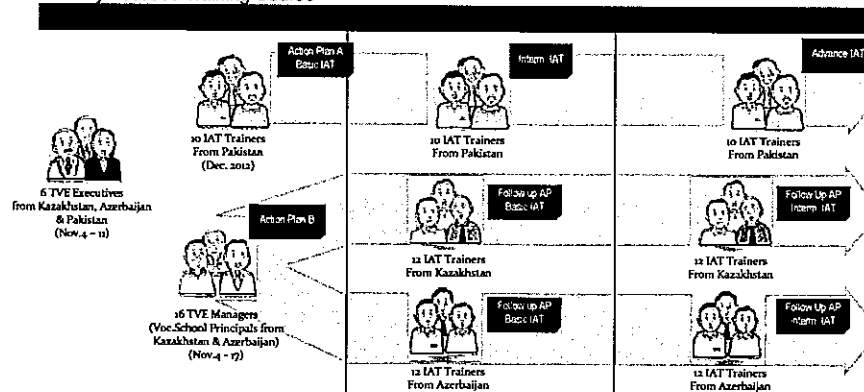


PRESENTATION ABOUT THE RESULTS OF INTERNATIONAL TRAINING ON INDUSTRIAL AUTOMATION TECHNOLOGY

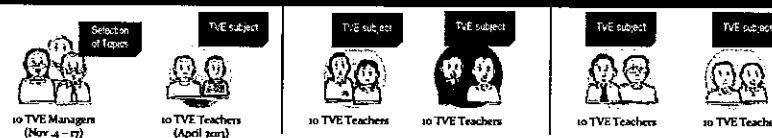
NOVEMBER 5-16, 2012

Training Program Structure

Country Focused Training Course



Group Training Course (Turkmenistan, Tajikistan, Kirgizstan, Afghanistan, Palestine)



GENERAL INFORMATION ABOUT THE RESULTS OF 3 COURSES IMPLEMENTATION

3 courses were conducted for the first Third Country Training Program (TCTP) in November. Those courses were:

- Group 1: Country Focus Training Course for Executive Managers
- Group 2: Country Focus Training Course for TVE Managers
- Group 3: Group Training Course for TVE Managers

For Group 1; 4 Executive Managers from Kazakhstan, Azerbaijan and Pakistan.

For Group 2; 15 TVE Managers from Kazakhstan and Azerbaijan.

For Group 3; 8 TVE Managers from Tajikistan, Kyrgyzstan, Afghanistan and Palestine.

COUNTRY FOCUS TRAINING COURSE FOR EXECUTIVE MANAGERS

Objective of training

- At the end of the training participants are expected to obtain basic knowledge about IAT and IAT Human Resources competencies.

In order to reach objectives methodology was consist of

- Lecture and Demonstration
- Field and Observation Tour

Annex3
**COUNTRY FOCUS TRAINING COURSE
FOR EXECUTIVE MANAGERS**

Lecture and Demonstration

- Explanation of the course objectives
- IAT introduction

Participation to IAT Event

- IAT sectorial meeting
- Company exhibition
- Mazhar Zorlu school tour

Field and Observation Tour

- Philsa
- Pınar Süt Mamülleri San. A.Ş
- Bilim İlaç
- Farplas
- "Yıldız University Omron Automation Lab."
- Yünsa
- Çerkezköy Turkish Textile Foundation Technical and Vocational Training Center

**COUNTRY FOCUS TRAINING COURSE
FOR TVE MANAGERS**

Objective of training

At the end of the training, participants are expected to

- To be aware of importance/ advantage of IAT
- To be able to create action plan for introducing IAT department in their school.

In order to reach objectives, methodology was consist of;

- Lecture and Demonstration
- Participation to IAT Event
- Field and Observation Tour
- Workshop (Group Discussion etc.)

**COUNTRY FOCUS TRAINING COURSE
FOR TVE MANAGERS**

Lecture and Demonstration

- Explanation of the course objectives
- IAT introduction
- IAT curriculum development
- Introduction WBTSS

Participation to IAT Event

- IAT sectorial meeting
- Company exhibition
- Mazhar Zorlu school tour

Field and Observation Tour

- Tetrapak , Atatürk Organized Industry Zone, and Lezita have been visited in Izmir
- Gamak, Hyundai, LG – Beko have been visited in Istanbul

Workshop

- Action (ver 1) plan preparing
- Presentation of action plan (ver1)

GROUP TRAINING COURSE FOR TVE MANAGERS

Objective of training

At the end of the course, participants are expected to:

- Understand the overview of IAT and IAT education.
- Identify the needs of IAT in their country.
- Create a proposal presentation for IAT training.

Methodology

- Lectures
- Industry visits
- Workshop
- Discussions

GROUP TRAINING COURSE FOR TVE MANAGERS

Lecture and Demonstration

- Explanation of the course objectives
- IAT introduction
- Introduction WBTSS

Participation to IAT Event

- IAT sectorial meeting
- Company exhibition
- Mazhar Zorlu school tour

Field and Observation Tour

- Bilim İlaç
- Serel Seramik San. ve Tic. A.Ş
- Imperial Tobacco Sigara ve Tütüncülük Sanayi ve Ticaret A.Ş.
- Özel Enka Vocational School
- Elginkan Vocational Education Center

Workshop

- Country report
- Presentation about IAT Training

GROUP TRAINING COURSE FOR TVE MANAGERS

Products

1. Country Report

- Information of TVE institutions(deeply for vocational high schools)
- Information of TVE teachers
- Needs of IAT in participant's country.

2. Presentation about IAT training

- Overview of the training,
- IAT Needs of the country,
- Explanation on IAT Basic Training.

Evaluation

Course will be assessed through the Module Evaluation, Course Evaluation and Field Observation Notes.

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Implementation Plan sheet for Country Focus & Group Training Activities

No	Activities	Targets	Number of Participant	Languages	December 2012				APR 2013				JUNE 2013				SEPTEMBER 2013				OCTOBER 2013				NOVEMBER 2013				DECEMBER 2013			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	PAKISTAN	TVE Trainers	10	E	3 weeks																				3 weeks							
					4	17																			4	23						
2		TVE Trainers	12	T&R													4 weeks															
																	16				12											
3	KAZAKHSTAN	TVE Trainers	12	R									4 weeks																			
													3								29											
4		TVE Trainers	12	E&R																									4 weeks			
																													2			28
5	Group Training	TVE Trainers	10	E&R					4 weeks																							
									1																							

No	Activities	Targets	Number of Participant	Languages	FEBRUARY 2014				APRIL 2014				JUNE 2014				OCTOBER 2014				NOVEMBER 2014				DECEMBER 2014				FEBRUARY 2015				MARCH 2015			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	PAKISTAN	TVE Trainers	10	E																	3 weeks															
																					10				29											
2	KAZAKHSTAN	TVE Trainers	12	T&R													3 weeks																			
3	KAZAKHSTAN	TVE Trainers	12	R									3 weeks																							
													2												21											
4		TVE Trainers	12	E&R																					4 weeks											
																													1							
5	Group Training	TVE Trainers	10	E&R	4 weeks				4 weeks																4 weeks				4 weeks							
					3				1	March	31	March																					2			
																																	2			28

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**MINUTES OF MEETING
OF
THE FORTH JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES IN THE REPUBLIC OF TURKEY**

Agreed upon between


Ministry of National Education,


Turkish Cooperation and Coordination Agency

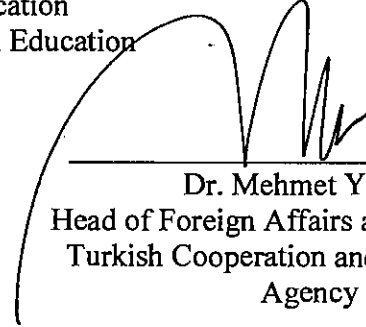
and

Japan International Cooperation Agency

Ankara
11th June, 2013


Mr. Yücel Yüksel
Head of Department,
General Directorate of Vocational and
Technical Education
Ministry of National Education


Dr. Takujiro Ito
Chief Advisor
JICA Expert Team


Dr. Mehmet Yılmaz
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

The Forth Joint Coordinating Committee (hereinafter referred to as the "JCC") Meeting on the Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey (hereinafter referred to as "the Project") was held on June 11, 2013, at the King Hotel Güvenlik, Ankara.

JCC members (refer to Annex 1) attended the meeting. Ministry of National Education (hereinafter referred as "MoNE), Turkish Cooperation and Coordination Agency (hereinafter referred as "TIKA") and the Japanese expert team followed the agenda of the meeting (refer to Annex 2), and the results of which are summarized as follows.

1. Opening Statements

Opening statements were delivered by Assoc. Prof. Dr. Omer Açıkgöz, Director General of MoNE, Mr. Masahiro Ueki, Senior Representative of JICA Turkey Office and Dr. Mehmet Yılmaz, Head of Foreign Affairs and Partnerships Department of TIKA.

2. Presentation of TIKA about training cooperation of target countries.

Dr. Yılmaz presented the activities of TIKA which are conducted in Project target countries. He stated that the activities in target countries differ from country to country; since their needs, economic levels, situations etc. are different. The needs of each country are studied, specified and the project is proposed. The TIKA project activities include technical training in Turkey, construction, donation of the equipment, publishing of books, Internship and so on. Main areas are education, agriculture, health, restoration activities etc.

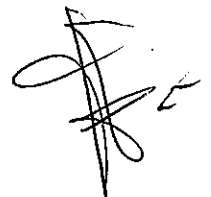
Dr. Ito, JICA Expert, asked TIKA the possibility of sending Turkish expert to Kazakhstan, since the government of Kazakhstan is willing to introduce IAT curriculum based on the model of Turkey and they asked the possibility of receiving Turkish experts.

Dr. Yılmaz replied that it is possible to send expert from Turkey to other countries, however, the detail have to be discussed with relevant departments. He also mentioned that official requests from Kazakhstan government are needed for the procedure.

3. Presentation of the Result of 2012 IATE Project Implementation

Mr. Gürcan Bildir, TTC Lecturer of Mazhar Zorlu Teacher Training Center (TTC), reported the basic achievement of 2012 TCTP Training (For detail, see Annex 3). Regarding the Group Training Preparation, he raised three topics as "Problems or Difficulties": 1) Delay in receiving application forms, 2) Number of application was not enough, and 3) Technical backgrounds of the applicants were not suitable for the training program.

Dr. Yılmaz replied that TIKA would be able to help regarding third topic. Dr. Emin, Özdamar, Senior Program Officer from JICA Turkey Office, explained that the Project faced same problem for selection of Kazakhstan trainees for Country-Focused Training Program. At that time, the Project was able to invite suitable trainees with the help of TIKA local office. However, he mentioned that there was a difficulty in Turkmenistan selection for Group Training Program. Dr. Yılmaz agreed that we should not invite trainees if their background is not appropriate. He proposed JICA to share the information if they faced similar problem next time.



Mr. Ueki from JICA agreed to share that information when the Project faced that problem, but he also mentioned that it is important to report this problem to the TIKA local office, in order to prevent same situation. He shared his idea that we need to invite trainees to the training as much as possible with appropriate background, thus, by reporting to TIKA local office, they could also discuss this to Turkmenistan government.

Dr. Yılmaz from TIKA replied that the problem may be different; since the Turkmenistan government chooses the applicant and they want to send those people. Thus, he believed that the only way to prevent this problem is to refuse the applicant if they do not match the requirement. However, he agreed that this problem will be shared with TIKA local office.

Regarding welfare and service of TCTP program, Mr. Bildir mentioned that participants' health problems were another difficulty the Project faced. Dr. Yılmaz asked for detail of this problem. Mr. Özdamar from JICA explained that during Group Training, trainees could not go to the hospital immediately when he needed due to insurance problem. Mr. Egemen Doğer, Coordinator from TTC, added that this problem is already solved for the Kazakhstan Training course.

Then Mr. Bildir explained about the Web-based Training Support System (WBTSS), which was developed to conduct follow-up of the trainees. He raised three difficulties faced regarding WBTSS: 1) Slow internet speed in TTC, 2) Need for translation of messages from Russian trainees, and 3) Language problem obstructs active interaction in the WBTSS.

Regarding third problem, Ms. Miyuki Konnai asked how is the situation for the Palestine and Afghanistan trainees, which the course language is English. Mr. Bildir replied that WBTSS is mainly used for technical training, and the trainings are not yet conducted for those countries yet.

4. Proposing activities for the 2nd Year of the Project

Mr. Doğer from TTC presented the proposing activities for the second year of the project (For details, see Annex 4, 5). He explained that GI will be prepared by TTC, send it to the target countries through TIKA, and selection will be done by four organizations: MoNE, JICA, TIKA and TTC.

Mr. Ahmet Daştan, TIKA Expert, asked which phases we are in for the preparation of Azerbaijan TCTP Training. Mr. Doğer answered that TTC is now preparing GI draft, and soon it will be submitted to JCC members. Mr. Özdamar from JICA also added that there will be five courses every year, and agreement between MoNE, TIKA and JICA regarding budget must be fixed. Since JICA plans budget of next year during November to January, he proposed that this agreement must be signed soon.

Mr. Daştan asked why one month preparation is not set for Pakistan course. Mr. Doğer replied that there will be no selection for next Pakistan since the same trainees who came for the IAT Basic Courses will be invited to following course.

Mr. Daştan also mentioned that application from Palestine and Afghanistan may have some difficulty. He recommended that it may be better to send GI much earlier. Dr. Ito explained that if we recruit participants too early, some institution may not commit because their activity schedule



is changing frequently, and as results in last moment the candidate could be changed. Thus, the Project is planning to send GI about two months before the training. Dr. Aıkgöz from MoNE summarized that schedule will be set taking into consideration of those advices.

Mr. Şerafettin Cankurt, Expert of MoNE, shared his idea that for understanding real needs of the target countries, it may be a good idea to invite people from target countries to JCC. Dr. Aıkgöz mentioned that JCC is the coordination meeting of the organizers for management purpose. The target countries are the beneficiaries of the Project.

Dr. Aıkgöz asked whether pre-test and post-test are used for the modules. He added that the achievement must be clearly set for the evaluation. He said that it is important to set the objective such as knowledge, competencies, etc. for each module; according to the objective, criteria for the evaluation must be set; and achievement must be measured. Mr. Doęer replied that pre-test and post-test are done before and after module. When the module is finished in one day, then the test is conducted in same day. Regarding this, Dr. Aıkgöz suggested that if you do the pre-test and post-day on the same day, maybe half of the people maybe remember. So, it is recommended to do post-test 7 days to 10 days later. Also, objective-test must be done to measure the level of the trainee first.

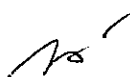
Mr. Faysal Oęulcu, Expert of MoNE, questioned about the certificate. He wanted to learn why in-service-training certificate has also been given to the trainees. Then, Mr. Şerafettin Cankurt replied that since TCTP training courses are being conducted in TTC within the concept of In-service Training course, MoNE has to prepare in-service-training certificates for the related trainees and send to TTC, even if they are not given to the trainees.

Dr. Aıkgöz also added that it is better to put some measurement or the score in the certificate. It may be better to articulate their achievement. Regarding the certificate, Mr. Daştan asked who will sign the documents, and Dr. Aıkgöz answered that they are signed by three organizations: TIKA, JICA and MoNE. Dr. Aıkgöz also suggested that the list of subjects, given to the trainees during the training course, can be added to the back side of certificate, which is being prepared by MoNE, TIKA and JICA. In this case, the certificate will be more useful for trainees to prove their qualifications in their countries

Dr. İbrahim Üzkurt, Head of Group of MoNE, mentioned that certificate of MoNE In-service Training is also given to the participants. Mr. Özdamar replied that the In-service Training certificate is prepared in Turkish, which may cause confusion. Thus, he recommended not issuing In-service Training Certificate. Dr. Aıkgöz also agreed that one certificate is enough for one course. This matter will be discussed between person in charged and will be decided.

5. PDM indicators

Dr. Ito explained about the structure of PDM and presented the draft Indicators (For more detail, see Annex 6). He proposed that JCC members should examine the content and send the feedback by mail, and finalization and authorization should be done in next JCC.



6. Other Topics

Dr. Aıkgöz summarized the meeting result as follows:

- 1) We will provide all the support to TTC for the achievement of the Project
- 2) Accommodation problem must be solved. We need to find a way to utilize TTC as accommodation. One idea is to work with tourist vocational high schools to provide service. Dr. Aıkgöz commented that since TTC lecturers have to focus only on organizing and conducting the training courses, it will be a good solution to transfer the accommodation services of TTC to another institution like a tourist vocational high school. Then, he added that this matter will be discussed internally to find an effective solution.
- 3) Need to find solution for slow internet.
- 4) Need to consider about the problem of translator.

Dr. Yılmaz from TİKA added TTC CPs must prepare the GI for Azerbaijan as soon as possible.

Dr. Ito presented a case regarding the problem of translator. He explained that in JICA International Training Program in Japan, for each course, JICA assign a training coordinator who has ability for translating the course language. Since he/she is assigned full time, during the preparation, implementation and evaluation/reporting of the course, can fulfilled the need of the course. He proposed if it is possible to introduce this system in current course of TCTP. Dr. Aıkgöz answered that both topics will be discussed.

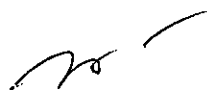
Dr. Yılmaz had to leave for the meeting, so the following topics were discussed without him.

Dr. Ito raised the issue of CP assignment that is expiring coming June 18. He presented a table of the calculation about the workload of the project and number of needed CP for the implementation (For detail, please see annex 7). He pointed that, the assignment of 7 CPs is essential for the effective implementation of the project, and if number of the assigned CP is reduced, project activities will be obstructed. However, Dr. Aıkgöz said that the problem is already solved. He asked Dr. İbrahim Üzkurt, Expert of MoNE, to confirm about it. Dr. İbrahim Üzkurt replied that Izmir Governorship has sent the official assignment letter to him for approval. But, as he said, there is actually no need to send him, because the approval of Governorship is enough for the assignment of CPs.

Ms. Konnai from JICA explained about following topics:

- 1) Midterm Evaluation in November
- 2) Management Class IAT Training in Japan

Regarding first topic, midterm evaluation, she explained that JICA will send one consultant and one staff from JICA Turkey for this activity, and asked for cooperation from JCC members. They will stay in Izmir for 1 to 2 weeks for their survey. The leader of the evaluation team will be the chief representative of JICA and will joint for analysis of the evaluation. Dr. Özdamar added that this will be Joint Evaluation, so asked MoNE and TİKA to assign personnel for the evaluation. Dr. Aıkgöz agreed on this topic.



Regarding second topic, management class IAT Training in Japan which will be held in the end of September to early October, it was replied that 3 people from MoNE is being planned to send to Japan for IAT training, but still under discussion.

Then, Dr. Aıkgöz replied both topics, as;

- Necessary personnel assignment will be done by MoNE for mid-term evaluation in November.
- The names of people, who will be sent to Japan for IAT training, will be internally discussed and informed to JICA as soon as possible.

Mr. ITO kindly asked MoNE to confirm the plans, presented by Mr. Doęer. Then, Dr. Aıkgöz asked Mr. Yksel whether those plans have already been analyzed by him. And Mr. ITO replied that those plans have been developed based on the discussions with Mr. Yksel. But, since Mr. Yksel asked few more days to analyze the plans in details again, Dr. Aıkgöz stated that soon after analyzing and confirming, the plans will be officially signed.

Mr. Ueki asked about the minutes of JCC-4. Mr. ITO replied that the minutes will be prepared and sent to all related parties for getting the comments or necessary corrections. Then, it will be finalized and submitted to the related people of the parties for signing.

Mr. Ycel Yksel concluded the 4th JCC, confirming that all program of the JCC was completed and approved by the JCC members.



Attendance List for 4th JCC Meeting

JCC Members, Turkish side

11/06/2013

No.	Name	Position	Affiliation	Sign
1	Ass. Prof. Dr. Ömer Açıkgöz	Director General	GD of Vocational and Technical Education, MoNE	
2	Ms. Şennur ÇETİN	Head of Group	GD of Vocational and Technical Education, MoNE	
3	Mr. Yücel YÜKSEL	Head of Department	GD of Vocational and Technical Education, MoNE	
4	Dr. İbrahim UZKURT	Head of Group	GD of Vocational and Technical Education, MoNE	
5	Dr. Mehmet YAZAR FAYSAL ÖBÜLCÜ	Expert	GD of Vocational and Technical Education, MoNE	
6	Dr. Mehmet YILMAZ	Head of Foreign Affairs and Partnerships Department	Turkish Cooperation and Coordination Agency	
7	Mr. Ahmet DAŞTAN	Expert	Turkish Cooperation and Coordination Agency	
8	Mr. Hasan KORKMAZ	Acting Principal	Mazhar Zorlu Technical and Vocational High School	
9	Mr. Egemen Doger	Coordinator	Mazhar Zorlu Teacher Training Center	
10	Mr. Gürcan BILDIR	TTC Lecturer	Mazhar Zorlu Teacher Training Center	
11	Mr. Feyzullah Çiftçi Atilla Başak	(Observer) Expert	GD of Human Resources, MoNE	
12	Mr. Hüseyin Kaya	(Observer) Expert	GD of European Union and Foreign Relationships, MoNE	
13		(Observer)	GD of Teacher Training and Development, MoNE	

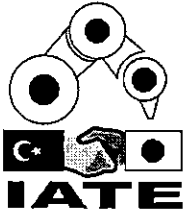
14 Serap KEM CANKUR

Expert

MoNE

JCC Members, Japanese Side

No.	Name	Position	Affiliation	Sign
1	Masahiro UEKI Mr. Akio SAITO	Senior Chief Representative	JICA Turkey Office	
2	Ms. Miyuki KONNAI	Project Formulation Advisor	JICA Turkey Office	
3	Mr. Emin ÖZDAMAR	Senior Program Officer	JICA Turkey Office	
4	Dr. Takujiro ITO	Project Chief Advisor	JICA IATE Project Expert Team	
5	Ms. Ayako NAKAZATO	Project Expert	JICA IATE Project Expert Team	
6	Ms. Mami FUJISHIMA	Project Coordinator	JICA IATE Project Expert Team	



Industrial Automation Technology Extension Project for Central Asian and Middle East Countries

MoNE-TIKA-JICA Cooperation Project
Mazhar Zorlu Technical and Industry Vocational High School Teacher Training Center
Mevlana Mah. 1776 Sok. No: 2/2 Bornova - İZMİR TURKEY
Tel & Fax: +90 232 342 7043



Ministry of National Education
Republic of Turkey

The Industrial Automation Technology Extension Project For Central Asian / Middle East Countries **The Fourth Joint Coordinating Committee Meeting**

Agenda of the Meeting

Date : June 11, 2013 (Tuesday)
Time : 14:00 – 16:30
Venue : Meeting Room of General Directorate of Technical and Vocational Education, MoNE

Program:

1. Explanation of the Agenda by Mr. Yücel YÜKSEL (5 min.)
2. Opening Remarks
 - (1) Ass. Prof. Dr. Ömer AÇIKGÖZ, DG of Vocational and Technical Education, MoNE (5 min.)
 - (2) Mr. Akio SAITO, Chief Representative, JICA (5 min.)
 - (3) Dr. Mehmet YILMAZ, Head of Foreign Affairs and Partnerships Department, TIKA (5 min.)
3. Presentation of TIKA about training cooperation of target countries (15 min.)
4. Presentation of the Results of 2012 IAT Project Implementation (30 min.)
 - (1) Overall presentation by acting principal of MZVTE high school Mr. Hasan KORKMAZ
 - (2) Discussion on the Lesson Learned from 2012 TCTP and improvement by Mr. Gürcan BILDIR

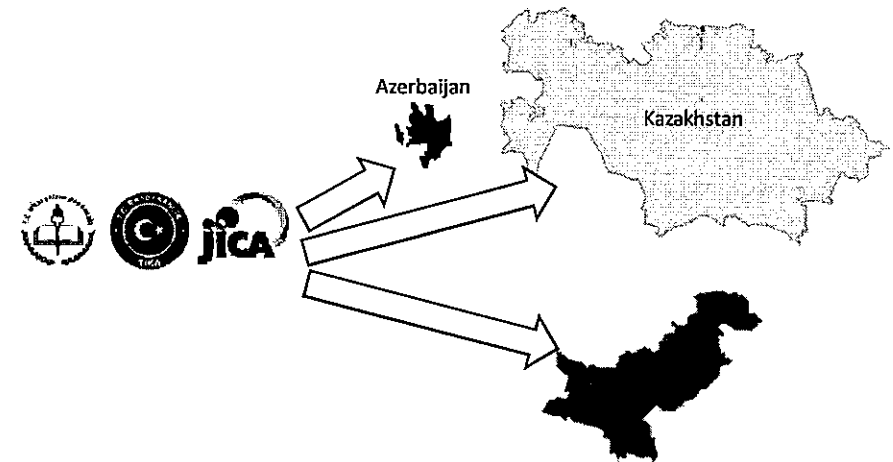
Tea Break (15 min.)

5. Proposing activities for the 2nd Year of the project by Mr. Egemen DOĞER (15 min.)
6. Discussion on the PDM indicators (15 min.)
 - (1) Presentation of the draft indicators by Dr. Takujiro ITO
 - (2) Discussion
7. Other Topics if Necessary, Upon the Proposition of JCC Members

Summarize of 1st Year Activities of Third Country Training Program

Need Survey

IATE Project started with the need survey study in order to identify the IAT levels of technical and vocational educations in target countries.



TCTP Trainings

Below trainings have been conducted in TCTP so far.

Administrator Training		
Training	Country	Number of participants
Country Focused Training for Executive Managers	Azerbaijan, Kazakhstan, Pakistan	4
Country Focused Training for TVE Managers	Azerbaijan, Kazakhstan	15
Group Training for TVE Managers	Kirgizistan, Tajikistan, Palestine, Afghanistan	8
Technical Training		
Training	Country	Number of participants
Country Focused Training for TVE Teachers	Pakistan	12
Group Training for TVE Teachers	Kirgizistan, Tajikistan, Uzbekistan, Turkmenistan,	11
Country Focused Training for TVE Teachers	Kazakhstan	12

Administrators' Training Program

Special curriculum was developed for administrators' training program.

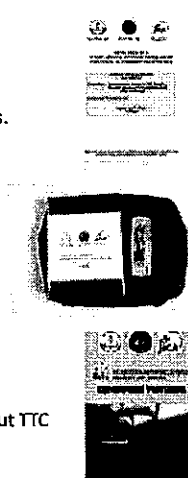
- What is IAT?
- IAT experiences in Turkey
- Curriculum development in Turkey
- Field visit in Izmir and Istanbul
- Sectorial meeting
- Action plan for future implementations



Preparations

Below preparations were made for master trainers training program:

- General informations (GI) was prepared for invited countries.
- Proper selection was made according to the application forms of applicants.
- Promotional items were served to the trainees.
- Participant guide and course handbook were prepared for each courses.
- Course orientation and general information were given to the trainees about TTC and the Izmir city.



Preparations

Problems or Difficulties

- Application forms were received from the invited countries very late. (Group training)
- Number of application was not enough. (Group training)
- Technical backgrounds of the applicants were not suitable for training program (Group training)

For Improving;

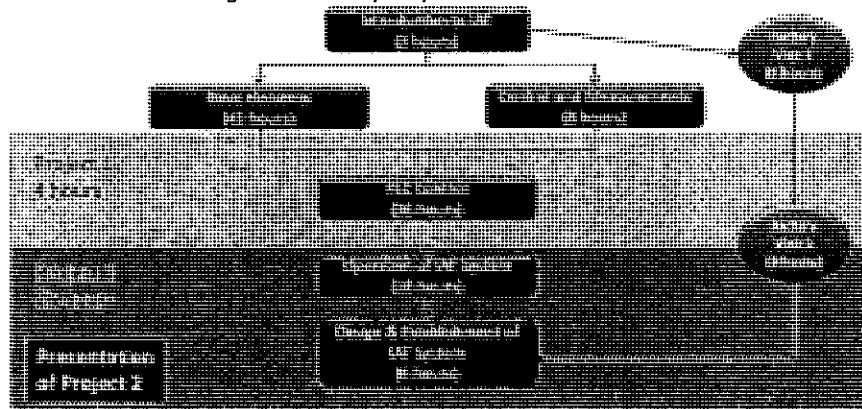
- GI forms should be sent earlier as planned.
- TIKA representative offices need to be informed about the applications more detaily.

Training Curriculum

Training textbooks were written by the counterparts and their contents have been revised based on the evaluation and feedback sheets.

Duration of the training has been changed from 6 to 8 lecture hours in a day.

New curriculum was developed according to the needs of target countries on IAT education, which has been learnt through the need survey study.

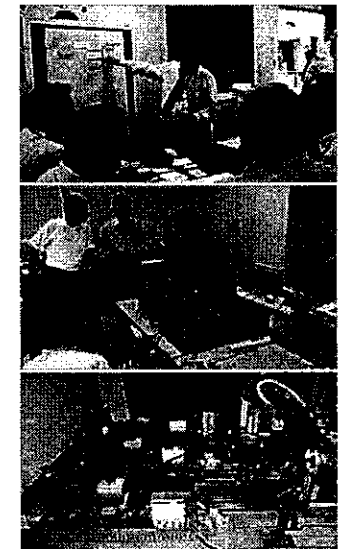


Training Curriculum

IATE Project organized an Instructional Design (ID) Seminar, which was given by Dr. SUZUKI.

New training equipment set was procured by JICA as donation to TTC. Those equipment has already been installed in related laboratory and the lecture for operating was given by short time expert Mr. Hideki KUMAGAI.

TIKA also sent the equipment in April 2013, based on the needs of TTC.



Training Curriculum

Problems or Difficulties

- Some parts of basic level automation subjects were difficult for the trainees. (Group training)
- Participants asked questions about IAT curriculum in TVE schools in Turkey

For improving;

- New curriculum can be prepared according to level of group training participants, including basic electricity, electronics, mechanics and computer programming.
- Experience of IAT in Turkey should be added in curriculum.

Welfare and Services

Satisfaction of participants about hotel services was very high according to result of training reports.

New Telephone devices was installed in TTC for international calling.

Laundry services opened for participants.

Problems or Difficulty

- Training Center (TTC) in Mazhar Zorlu Technical High School is not ready for accomodation.
- Participants' health problems are another difficulty for the program.

For improving;

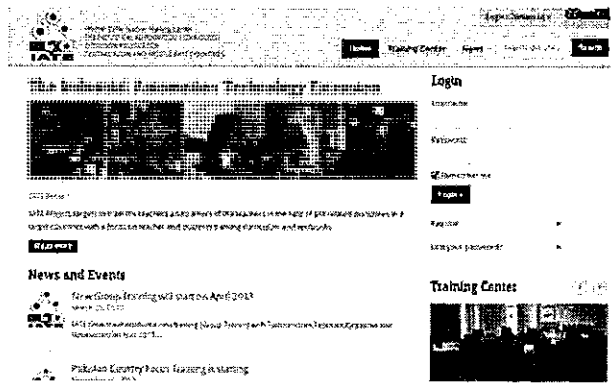
- TTC has to be made ready for the accomodation of TCTP trainees.

Web Based Training Support System

Web Based Training Support System (WBTSS) was installed in order to make follow up participants' activities.

www.induste.com has become new platform for communication with the participants.

Participants who can speak English uses induste.com very effectively especially Pakistan teachers.



Web Based Training Support System

Problem or difficulty

- Registration sometimes delays because of low speed internet .
- Some groups can not write messages in English. We need Russian Language support.
- Language is one of the biggest problems to communicate with the countries, speaking Russian language.

Improvement

- Internet connection of TTC must be strenghtened.
- One translator should be assigned out of training on those matter.

Level of achievement of WBTSS(=Web Based Training Support System) 2012-2013

Group number	Course Name (Training period)	Countries	Language	Number of Participants	Training period in Turkey				After training in their countries			
					Level of Registration	Level of Operation*3	Level of Input data*4	Level of using calendar*5	Level of Access	Level of Contact	Level of Up-date*6	Level of Report*7
Group 1	CFT*1 for TVE Manager (Nov / 5 - Nov / 16 , 2012 : 2weeks)	Azerbaijan Kazakhstan	Russian	14	S	E	E	E	E	E	E	E
Group 2	CFT for TVE Trainers : <u>IAT Basic</u> (Dec / 3 - Dec / 21 , 2012 : 3weeks)	Pakistan	English	10	S	A	B	E	B	B	D	B
Group 3	GT*2 for TVE Manager (Nov / 5 - Nov / 16 , 2012 : 2weeks)	Afghanistan, Kyrgyzstan, Tajikistan, Turkmenistan ,and Palestine	English (Russian)	8	S	C	D	E	E	E	E	E
Group 4	GT for TVE Trainers : <u>IAT Basic</u> (Apr / 15 - May / 10 , 2013 : 4weeks)	Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan	Russian (English)	11	S	C	D	E	D	D	E	E

*1: CFT= Country Focus Training

*2: GT= Group Training

*3: Operation = Download , Attached documents, E-mail

*4: Input data = Answer to the test and questionnaire.

*5: Using calenda = Input action plan data to calenda

*6: Update = Update their action plan use calendar of WBTSS

*7: Report = Report of their IAT Lesson

Level	% of achievement
S	100%
A	99% - 75%
B	74% - 50%
C	49% - 25%
D	24% - 1%
E	0%

Date:9/June/2013

Summary for level of achievement of WBTSS(=Web Based Training Support System) 2012-2013

1) Environment of "Web Based Training Support System" in TTC:

Low internet connection had problems (Registration delaying and couldn't use on time of lesson)



Need improve environment of internet connection in TTC.

2) How to use "Web Based Training Support System" more effectively during IAT training in Turkey?

For WBTSS Follow up content need more share all course leaders and link to lesson plan.



Need discussion and share about "How to use WBTSS in each course" together all TTC staff.

3) How to use "Web Based Training Support System" more effectively in their countries?

Some groups can not write messages in English and some country need improve environment of internet system.



- Need Russian to English Language Support . / - Input application indicator of GI, who has internet system in their office.

4) Language

Language is the one of biggest problem to communicate with countries which are speaking Russian.



TTC need translator at least one day in a week or translation online-service in internet.

Conclusion

* Training period in turkey:

During the training, we could not connect to the internet resulting in not being able to use the WBTSS in accordance with the curriculum. Furthermore, the course leader of each course were not able to share beforehand the plan on using the WBTSS, so the usage was biased. To be able to effectively use the WBTSS in the future, improvement of the internet environment and information sharing between course leaders is necessary.

* After training in their countries:

There is no access from the participants of the training course for managers after returning to their countries, but there is much access from participants of the IAT-Basic Course for TVE(=Technical and Vocational Education)Teachers. A factor for this may be the low internet usage of managers and that it may also be the result of VTE teachers actually becoming in charge of instruction of IAT after they return to their countries. However, even from the VTE teachers, communication mostly comes from those who can communicate in English very well. There was no contact from the Russian speaking participants. In the future, as the course for VTE teachers will be the central course, it would be indispensably necessary to strengthen the system of translating from Russian to English and vice versa.

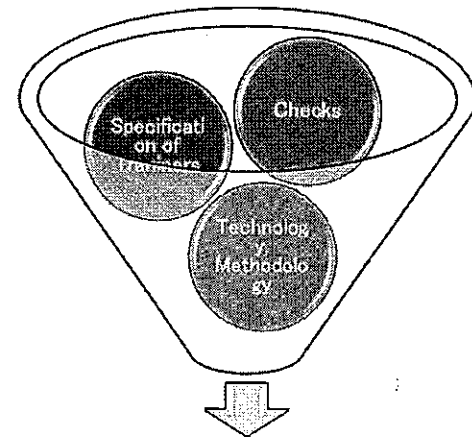
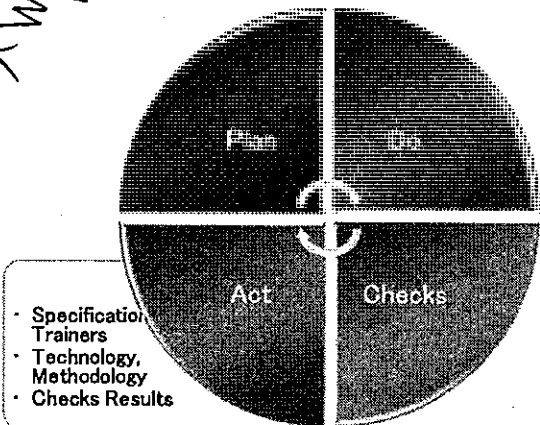


Presentation Titles

- Training Systems
- Develop, Prepare, Improve Curriculum, Training Materials
- General Training System Loop
- Time Table of Courses
- General Information GI
- Participants Selection and Arrangement
- Training and Evaluations
- Activities of 2nd Year
- Other Activities
- Questions and Answer

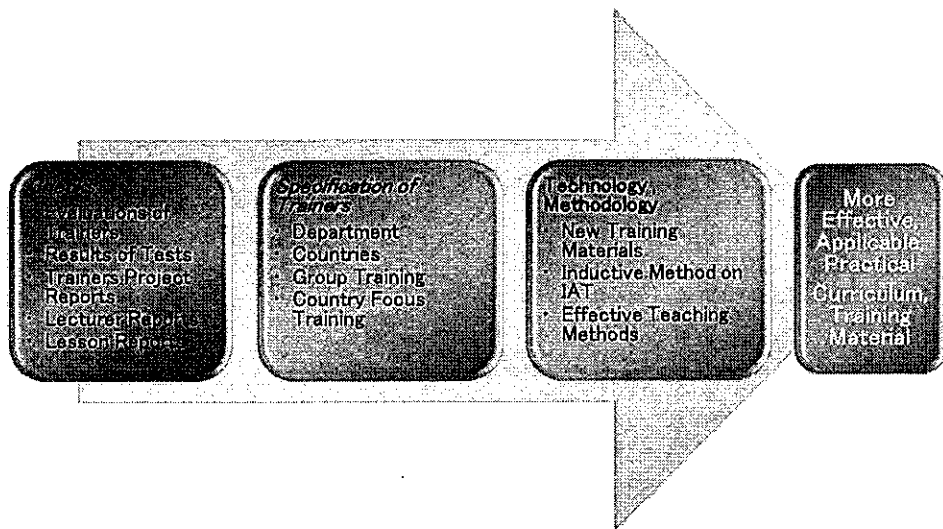
Training Systems

Develop, Prepare, Improve Curriculum, Training Materials

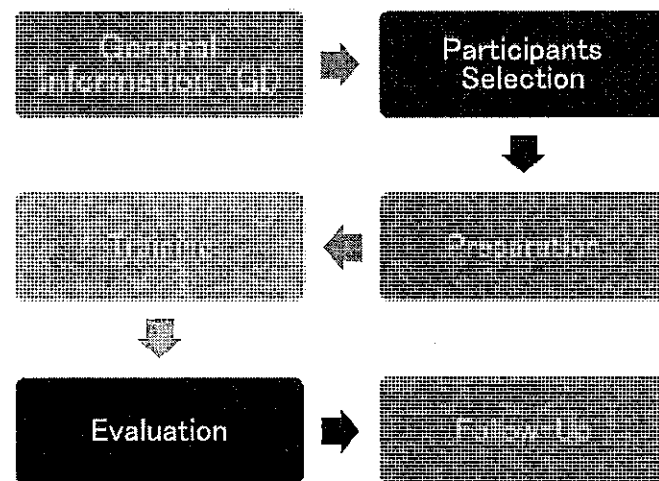


More Effective, Applicable, Practical Curriculum, Training Material

Develop, Prepare, Improve Curriculum, Training Materials



General Training System Loop



Time and Country Information of Courses

1 Country Focus Training (CFT)
2 Group Training (GT)

1. CFT Kazakhstan: June 3 (Mon) - June 28 (Fri), 2013

2. CFT Azerbaijan: September 16 (Mon) - October 11 (Fri), 2013

3. CFT Pakistan: November 11 (Mon) - November 22 (Fri), 2013

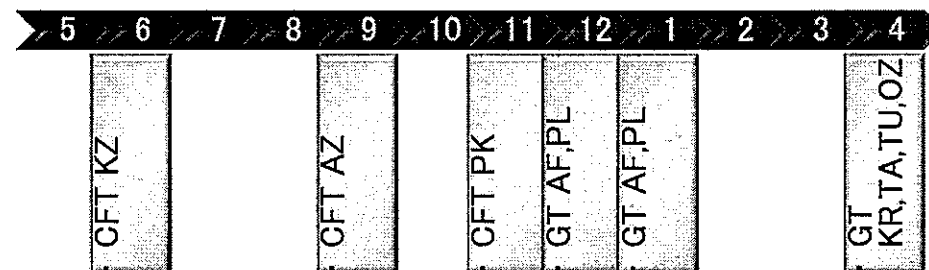
4. CFT Philippines/Azerbaijan: December 2 (Mon) - December 11 (Fri), 2013

5. GT Palestine/Azerbaijan: January 6 (Mon) - January 31 (Fri), 2014

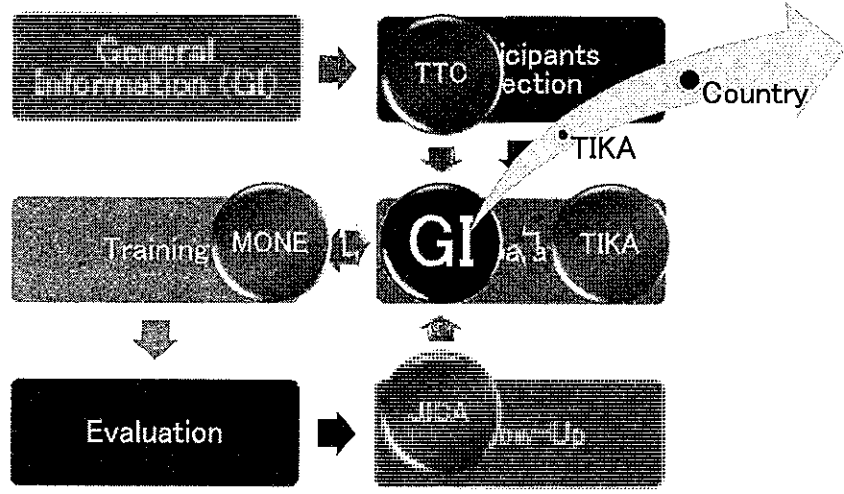
6. GT Kirgizstan/Turkmenistan/Tajikistan/Uzbekistan: April 14 (Mon) - May 9 (Fri), 2014

Time Table of Courses

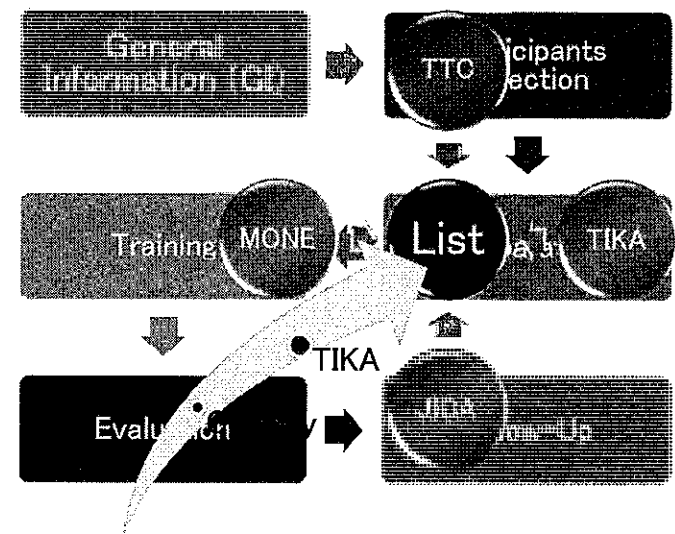
1. Quality courses in various forms
2. Quality, Effective



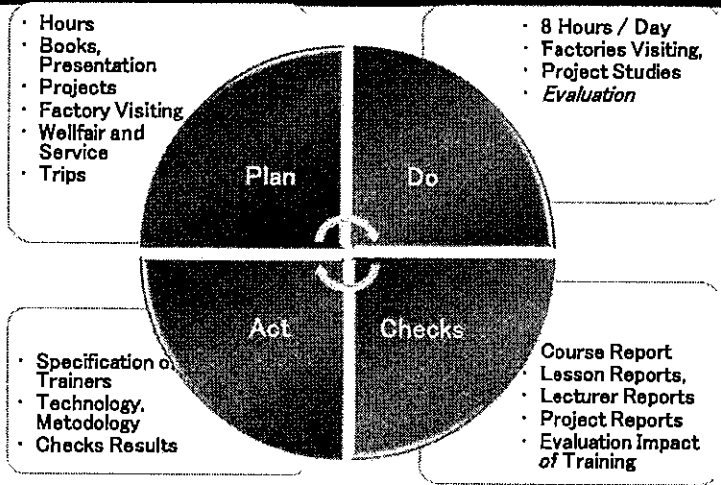
General Information



Participants Selection and Arrangement

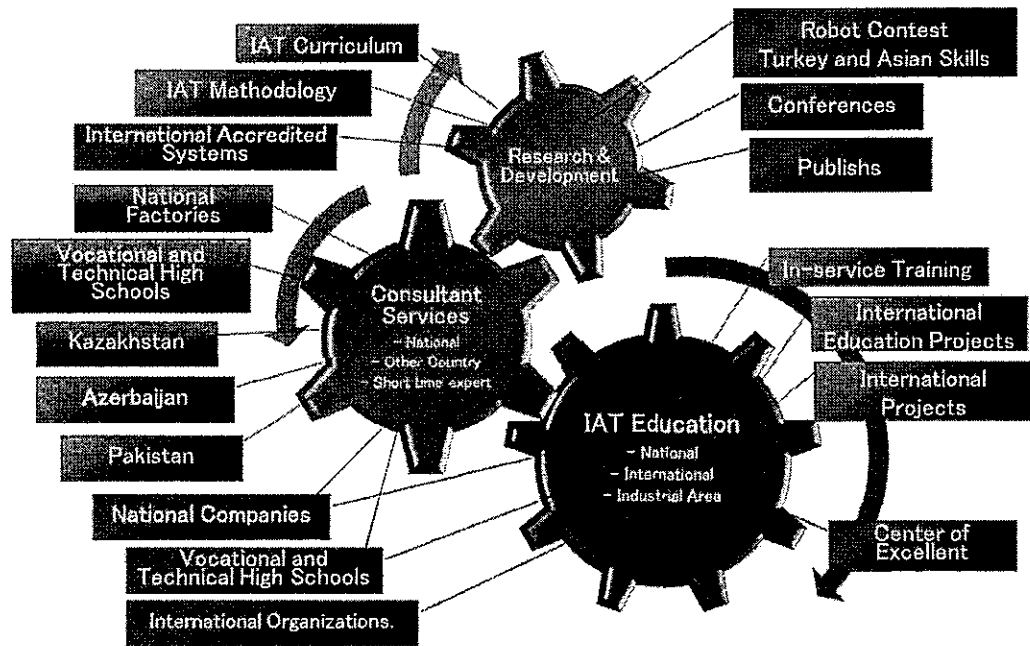


Training and Evaluations



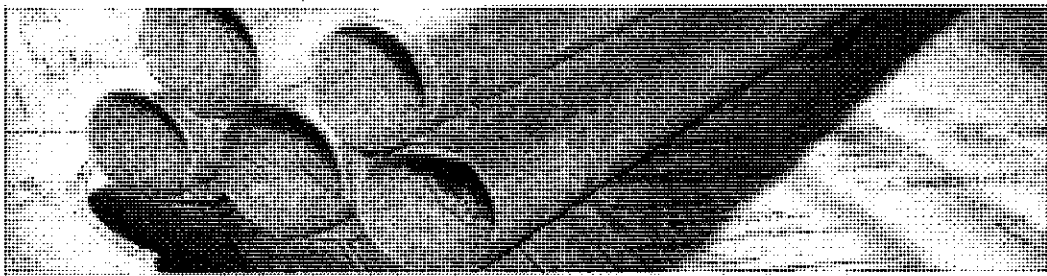
Other TTC Activities

- IAT Training, International In-service Training**
 - In-service Training
 - International Education Projects
 - Rainova
 - International Project
- Consultation Services, National and International**
 - Vocational & Technical Schools
 - Factories
 - International Schools
- Research & Development**
 - IAT Curriculum and Materials
 - Education Methodology
 - Project Base Contest
 - Turkey and Asian Skills



Activities of 2nd Year

	2 nd Year of Project												
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
Kazakhstan Training CFT-1													
Azerbaijan Training CFT-1		GI	Select Part		Training	Assess							
Pakistan Training CFT-2				GI	Select Part		Training	Reporting					
Afghanistan, Palestine Training GT-1					GI	Select Part		Training	Reporting				
Afghanistan, Palestine Training GT-2						GI							
Kirgizstan, Turkmenistan, Tajikistan, Uzbekistan Training GT-2								GI	Select Part			Training	
Kazakhstan Training CFT-2												GI	Select Part
Evaluate the Impact of the training													
Develop/Improve Training Curriculum													
Prepare/Improve Training Material													



Question – Answer

Thank You



Ministry of National Education
(MoNE)



Turkish Cooperation and
Coordination Agency
(TIKA)



Japan International
Cooperation Agency
(JICA)

Technical Cooperation Project

**The Industrial Automation Technology (IAT)
Extension for Central Asian and Middle East
Countries in the Republic of Turkey**

Work Plan for the Second Year of the Project

**April 2013
Ankara - Turkey**

1. General Information about the Project

1.1 Background of This Project

Government of Turkey (hereinafter referred as “GoT”) has been focused on implementing policy measures to strengthen its global competitiveness of manufacturing industries, and to introduce advanced technology and promote capital intensive industries to enable the delivery of high valued products and services since the 1990s. GoT has prioritized the improvement and strengthening of supply and labor market with capable technicians and skilled human resources.

In this context, the project “Establishment of Industrial Automation Technologies by the General Directorate of Vocational and Technical High Schools” was successfully carried out jointly by the General Directorate of Vocational and Technical Education (hereinafter referred as “GDVTE”) of Ministry of National Education (hereinafter referred as “MoNE”) and Japan International Cooperation Agency (hereinafter referred to as “JICA”) from 2001 and 2006 with the aims of establishing industrial automation technology (IAT) departments at international standards in Izmir Mazhar Zorlu and Konya Adil Karaagac Anatolian Technical High Schools, training the teachers of this department in Japan and developing training and education programs for IAT.

Following the successful implementation of the above-mentioned project, which produced outputs in line with the sectorial demands, it was planned in 2005 to newly establish IAT departments in 20 schools. The Teacher Training Centre (hereinafter referred to as “TTC”) was established at Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School in 2006 with the aim of developing the teaching staff who will work at the IAT departments of the 20 schools.

In 2007, GDVTE of MoNE and JICA commenced “The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department” (SPREAD). This project established the Teacher Training System within TTC, and teachers and staff at TTC were trained.

Following those successful initiatives, GoT and Japan decided to transfer the knowledge and experiences acquired through the above-mentioned projects to vocational and technical teachers of the countries in Central Asia and Middle East Region by means of training to be provided at TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School. In 28 November 2011, a Record of Discussion was signed between MoNE, JICA and Turkish Cooperation and Coordination Agency (hereinafter referred to as “TIKA”) setting the framework for the project implementation.

1.2 Framework of the Project

The basic project framework, based on the R/D exchanged in November 2011, is shown below.

(1) Super Goal/ Overall Goal

Super Goal: IAT human resources are developed in target countries.

Overall Goal: Technical education and vocational training capacity on IAT of target group is enhanced.

(2) Project Purpose

Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.

(3) Project Outputs

Output 1: Training for target group is appropriately planned.

Output 2: Training for target group is effectively provided.

Output 3: Follow-up system is established.

(4) Project Site

The project site will be TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School.

(5) Target Countries

Azerbaijan, Kazakhstan, Pakistan, Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan (Total of 9 countries)

(6) Relevant Government Agencies and Organizations

GDVTE of the MoNE will be the counterpart to JICA. However, in the practical manner, JICA experts will work together with counterparts in TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School. TIKA, a collaborating agency, will provide the necessary support.

(7) Beneficiaries

Direct beneficiaries: Teachers teaching IAT and related subjects in technical and vocational schools in target countries.

Indirect beneficiaries: Students in technical and vocational schools in target countries.

2. Implementation Structure

2.1 Key players and Implementation Structure

The Project Implementation Structure is shown below. TTC will be the main player of the implementation of the project, coordinating with MoNE, which is the superior division. MoNE will collaborating with TIKA. Activities such as needs survey, recruitment of participants, follow-up of the trained participants would be carried out with the help of TIKA Coordination Offices in the target countries.

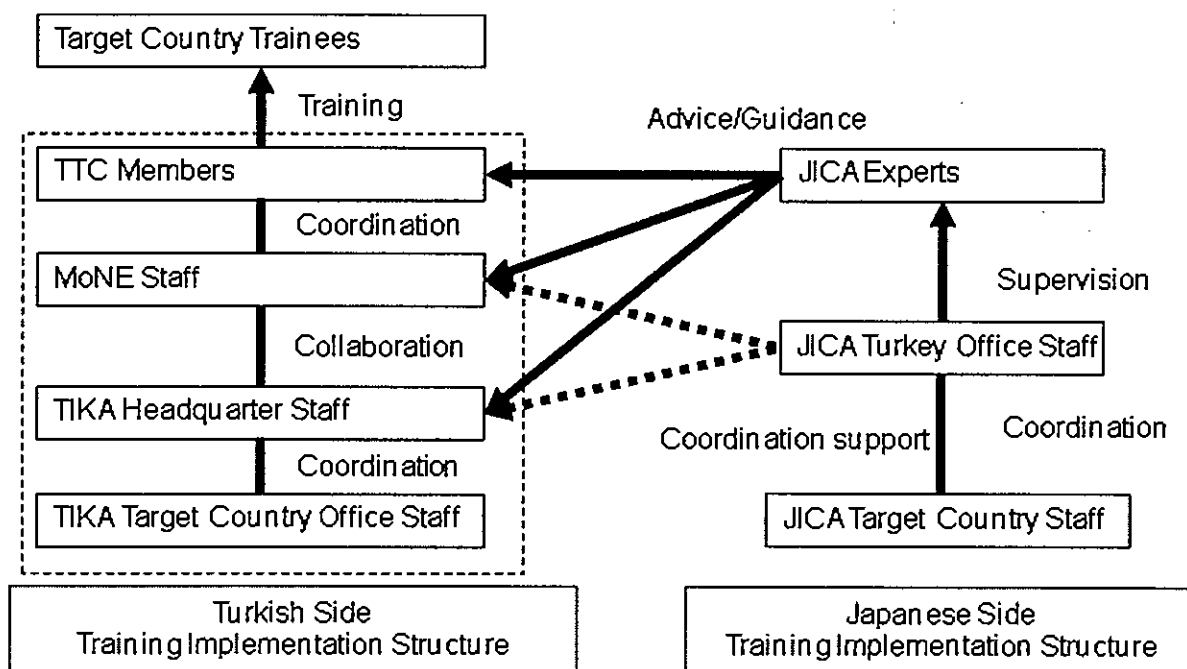


Figure 1. Implementation Structure

JICA experts, under the supervision of the JICA Turkey Office, would provide advice or guidance for the implementation of the international training to TTC members, MoNE staff and also to TIKA

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The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries
Work Plan for the Second Year of the Project

Headquarter staff. JICA Turkey Office would coordinate and support both MoNE and TIKA. If necessary, JICA Turkey Office will coordinate with JICA offices in target countries.

Detailed roles and responsibilities of each organization agreed on R/D are shown below.

Table 1 Detailed Roles and Responsibilities

Organization	Roles and Responsibilities	Inputs
Izmir Mazhar Zorlu School Teacher Training Center	<ul style="list-style-type: none"> -Develop implementation plan of the Trainings within the project framework. -Lead the implementation of the Trainings <ul style="list-style-type: none"> ◇ Analyses of target, curriculums, training contents, materials, etc. ◇ Development of course contents and materials. ◇ Organization of logistical arrangements. ◇ Provision of lectures and site visits. ◇ Compilation of implementation reports. ◇ Implementation of monitoring of the ex-participants' activities. ◇ Provision of follow-up support to the ex-participants. ◇ Conduct initial selection of training candidates. 	<ul style="list-style-type: none"> -Principal of Izmir Mazhar Zorlu Anatolian Technical and industrial Vocational High School to be the "Project Manager" who will bear administrative and technical responsibility for the implementation of the Project. -Services of counterpart personnel and administrative personnel. -Lecturers / instructors for the training. -Suitable office space for JICA Experts with necessary equipment. -Supply and/or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary owned by Turkey side. -Utility and other basic expenses to run the Project. -Available data and information related to the Project. -Information as well as support in obtaining medical service for the JICA Experts.
Ministry of National Education	<ul style="list-style-type: none"> -Take overall responsibility of the management and implementation of the Project. -Overall coordination among all stakeholders. -Coordinate with relevant Turkish Embassies in the target countries whenever the necessity arises. -Supervise the selection process of candidates for training and confirm the selection. 	<ul style="list-style-type: none"> -Director General of General Directorate of Vocational and Technical Education to be the "Project Director" who will bear overall responsibility of the Project. -Head of Department of General Directorate of Vocational and Technical Education to be the "Deputy Project Director" who will bear responsibility of the management of the Project. -Services of counterpart personnel. -Allocation of running experiences within MoNE, necessary for the Project. -Budget for Training Implementation Expenses. (Meeting Expenses, Document Printing, Other Expenses etc.)
TIKA Headquarters	<ul style="list-style-type: none"> -Coordination with MoNE, TTC, JICA and TIKA Program Coordination Offices.(PCOs) -Support the implementation of the Trainings. <ul style="list-style-type: none"> ◇ Developing GI. ◇ Compiling and providing country information to TTC. ◇ Provision of feedbacks to TTC according to gathered information from TIKA PCOs regarding general information of Target countries. ◇ Coordinate and support logistical arrangement for selection procedures of candidates. ◇ Participate in selection of candidate. ◇ Supporting of agreed portion of logistical arrangements. 	<ul style="list-style-type: none"> -Budget for Training Implementation Expenses. (Translation, Excursion Expenses, Expendable Supplies, Consumption Material etc.) -Expenses of Turkish members to participate in joint needs survey mission to country focused training target countries.
TIKA PCOs in Target Countries	<ul style="list-style-type: none"> -Coordinate with the target countries for the implementation of the Trainings. <ul style="list-style-type: none"> ◇ Coordination with the target organizations for proper selection of nominees. ◇ Distribution of GI and gathering of application forms. ◇ Notifying the selection results to the respective governments. ◇ Provide support to the participants for departure and giving orientation. ◇ Gather general information of country situation, feedbacks from participants, and potential 	

No


The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries
Work Plan for the Second Year of the Project

	<ul style="list-style-type: none"> training needs of the Target countries. ❖ Become focal point for the follow-up activities toward the ex-participants. 	
JICA Experts	<ul style="list-style-type: none"> -Provide overall support to the project through the facilitation and technical advice to MoNE, TTC and TİKA. -Support the implantation of the Trainings by giving technical lectures in the agreed field. -Participate in selection of candidates for trainings. 	
JICA Turkey Office	<ul style="list-style-type: none"> -Coordinate with MoNE, TTC, TİKA, JICA Experts and JICA Offices 	<ul style="list-style-type: none"> -Dispatch of the Experts (Chief Advisor/ Training Management/ Curriculum Development 1, Curriculum Development 2, Coordinator/ Assistant Training Management). -Budget for Training Invitation Expenses (Air Fare, Transportation, Pre-diem, Accommodation, Health Insurance etc.) -Expenses of JICA Experts to participate in joint needs survey mission to country focused training target countries.
JICA Offices in Target Countries	<ul style="list-style-type: none"> -Support coordination with target countries whenever necessary. 	

2.2 Implementation Team

(1) Turkish C/P team

The Turkish C/P team are organized by MoNE and TİKA as follows.

Table 2 Members of the Turkish C/P team

Organization	Name	Title in Organization	Title in Project
MoNE	Assoc. Prof. Dr. Ömer AÇIKGÖZ	Director General	Project Director
MoNE	Ms. Şennur ÇETİN	Head of Group	
MoNE	Mr. Yücel YÜKSEL	Head of Department	Deputy Project Director
MoNE	Mr. Yaşar Baki ALTUNBAŞ	Section Director	
MoNE	Mr. Hamit DOĞAN	M.Z. School Principle	Project Manager
MoNE	Mr. Hasan KORKMAZ	M.Z. School Deputy Principle	
MoNE	Mr. Murat ÖZDEVECİ	Chief of IAT Department	Counterpart
MoNE	Mr. Gürcan BILDIR	Chief of Lab.of IAT Department	Counterpart
MoNE	Mr. Mustafa NAZMAN	Teacher of M.Z. School	Counterpart
MoNE	Mr. Bülent VARDAL	Teacher of M.Z. School	Counterpart
MoNE	Mr. Telat GÜLER	Teacher of M.Z. School	Counterpart
MoNE	Mr. İsmail AKTAŞ	Teacher of M.Z. School	Counterpart
MoNE	Mr. Egemen DÖĞER	Teacher of M.Z. School	Counterpart
TİKA	Mr. Mehmet YILMAZ	Head of Department	
TİKA	Mr. Ahmet DAŞTAN	Expert	

(2) Japanese Experts and its duties

JICA will assign 4 experts to provide technical support for the implementation of the project. The primary duties of the experts in charge of this project are shown below.

Table 3 Duties of each expert

Name	Position	Duties
Dr. Takujiro Ito	Chief Advisor/ Training Management/ Curriculum Development 1	<ul style="list-style-type: none"> • Support the planning, implementation, and management of the project as a whole • Information sharing, communication, coordination with Turkish side • Supporting development of the training plan and curriculum • Supporting implementation of the training and seminars • Preparation of the reports for JICA
Mr. Hideki Kumagai	IAT Equipment/ Training Management	<ul style="list-style-type: none"> • Supporting the improvement of the IAT training curriculum and materials • Supporting the training of CP on IAT
Ms. Ayako Nakazato	Curriculum Development 2	<ul style="list-style-type: none"> • Supporting the development of the training materials • Supporting the development of the follow-up system
Ms. Mami Fujishima	Coordinator/ Training Management Assistance	<ul style="list-style-type: none"> • Assisting project management • Financial administration • Coordination between JICA and other related organizations • Supporting implementation of the training and seminar

3. Activities for the second year of the Project

Activities for second year, May 2013 to April 2014, of the project will be implemented as described below.

3.1 Develop and get the approval of the second-year Work Plan.

Based on the second year implementation plan, develop the second year Work Plan. In the Work Plan, fundamental policies of the operations, task objectives and detail procedures will be summarized. Through consulting with the relevant Turkish organizations about the content of the plan, it will be agreed between the JCC members.

3.2 Dispatch Short-Term Expert, IAT Equipment/ Training Management, to support CP staffs to improve training contents.

Dispatch Short-Term Expert, specialized in IAT Equipment/ Training Management, in order to support Country-Focused Training for Kazakhstan, TVE Trainers IAT Basic Course. The Expert will be in charge of procurement of the IAT equipment to TTC and development of the training module. For the procurement of the equipment, JICA and MoNE will support TTC so that the equipment will be delivered as scheduled.

3.3 Develop and improve training curriculum.

Based on the result of training evaluation for the first year and introduction of the new IAT equipment mentioned in Activity 3.2, update and improve the training material. If additional materials are necessary, the project team will prepare accordingly.

3.4 Prepare and improve training material.

Based on the result of training evaluation for the first year and new IAT equipment mentioned in Activity 3.2, update and improve the training material. If additional materials were essential, create and translate the material.

3.5 Implement training for MoNE managers in Japan.

In order to obtain strong support from managers in MoNE, invite manager from General Directorate of MoNE. The training will consists on observations, which to learn IAT in Japanese industries, IAT

Education, management of JICA International Training Centre etc. This training will also contribute to strengthening institutional structure of MoNE for sustainable implementation of the international training.

3.6 Revise the training schedule and training period.

Based on the result of training evaluation for the first year, revise the training schedule and the training period.

3.7 Finalize the Objectively Verifiable Indicators and confirm PDM.

Revise the PDM if necessary, and set the objectively verifiable indicators for the project purpose and outputs with JCC members.

3.8 Hold fourth Joint Coordination Committee (JCC) Meeting.

With the help of the project manager of the CP staffs, fourth JCC meeting will be held. At the meeting, second year Work Plan, training contents, Objectively Verifiable Indicators will be discussed and agreed in the minutes of the meeting (M/M). If necessary, revise PDM.

3.9 Support the conclusion of the Minutes of Meeting (M/M) on training contents.

Based on the agreement in Activity 8, create M/M draft and support the conclusion of the M/M between MoNE, TIKA and JICA.

3.10 Develop and distribute GI (General Information) to target countries.

Based on the developed curriculum in Activity 3 and training schedule in Activity 6, develop GI for both Country-Focused Trainings and Group Training. It will be sent to target countries through TIKA local offices.

3.11 Select participants for the Group Training.

Improve the difficulties faced in the first year trainings, select participants for the Group Training.

3.12 Arrange logistics for the implementation of the Country-Focused Training and Group Training courses.

Improve the difficulties faced in the first year trainings, arrange the logistics for training implementation.

3.13 Implement trainings.

Improve the difficulties faced in the first year trainings, implement the trainings.

3.14 Evaluate contents of the implemented trainings.

In each course, collect information from participants through questionnaires regarding evaluation for training contents, management, trainers, training materials etc. At the same time, collect information from the organizers, regarding problem, difficulties faced during the implementation of the trainings. Those results will be analysed and shared as lessons learned, as good practices and as points to be improved for the next trainings. For the capacity development of the CP staffs, the evaluation will be guided to be implemented actively by CP staffs.

3.15 Conduct follow-up based on the plan.

Based on the follow-up plan developed in the first year, implement technical follow-up support activities. The WBTSS developed in the first year will be used for the implementation of the follow-up.


3.16 Evaluate the impact of the training.

Conduct morning survey to ex-participants, regarding activities and application of the training

achievement in their home countries. In addition, collect information regarding for sustainable activities in target countries, needs of training contents in the target countries, and needs in follow-up activities. Those information will be analysed and used for improvement of the training contents.

3.17 Develop the second year project progress report.

In the end of the second year, the project will develop the progress report regarding achievements and progress of activities of the period. The report will be presented in JCC meeting.

No. 1 

Course Title and Course Schedule

As of April 26, 2013

Group Training Program

Course Title	Country	Participants	Attended Participants		Days	Starting Date		Ending Date		
1 Group Training for TVE Managers	Afghanistan	2	10	2	8	2-week	05.11.2012	Pzt	16.11.2012	Cum
	Kyrgyzstan	2		2						
	Palestine	2		2						
	Tajikistan	2		2						
	Turkmenistan	2		0						
2 Group Training for TVE Trainers: IAT Basic 2013 A	Kyrgyzstan	3	14	2	11	4-week	15.04.2013	Pzt	10.05.2013	Cum
	Tajikistan	4		3						
	Turkmenistan	4		4						
	Uzbekistan	3		2						
3 Group Training for TVE Trainers: IAT Basic 2013 B	Afghanistan	5	10	0	4-week	02.12.2013	Pzt	27.12.2013	Cum	
	Palestine	5								
4 Group Training for TVE Trainers: IAT Basic 2014 B	Afghanistan	5	10	0	4-week	06.01.2014	Pzt	31.01.2014	Cum	
	Palestine	5								
5 Group Training for TVE Trainers: IAT Basic 2014 A	Kyrgyzstan	4	13	0	4-week	14.04.2014	Pzt	09.05.2014	Cum	
	Tajikistan	3								
	Turkmenistan	3								
	Uzbekistan	3								
6 Group Training for TVE Trainers: IAT Basic 2015 A	Kyrgyzstan	3	13	0	4-week	17.11.2013	Paz	12.12.2014	Cum	
	Tajikistan	3								
	Turkmenistan	3								
	Uzbekistan	4								
Total			70	19						

Country Focused Training Program

Course Title	Country	Participants	Attended Participants		Days	Starting Date		Ending Date		
1 Country Focused Training for Executive Managers	Azerbaijan	1	4	1	4	1-week	05.11.2012	Pzt	09.11.2012	Cum
	Kazakhstan	1		1						
	Pakistan	2		2						
2 Country Focused Training for TVE Manager	Azerbaijan	7	15	7	14	2-week	05.11.2012	Pzt	16.11.2012	Cum
	Kazakhstan	8		7						
3 Country Focused Training for TVE Trainers: IAT Basic	Pakistan	10	10	10	10	3-week	03.12.2012	Pzt	21.12.2012	Cum
4 Country Focused Training for TVE Trainers: IAT Basic	Kazakhstan	12	12	12	0	4-week	03.06.2013	Pzt	28.06.2013	Cum
5 Country Focused Training for TVE Trainers: IAT Basic	Azerbaijan	12	12	0	4-week	16.09.2013	Pzt	11.10.2013	Cum	
6 Country Focused Training for TVE Trainers: IAT Intermediate	Pakistan	10	10	0	3-week	04.11.2013	Pzt	22.11.2013	Cum	
7 Country Focused Training for TVE Trainers: IAT Intermediate	Kazakhstan	12	12	0	3-week	02.06.2014	Pzt	20.06.2014	Cum	
8 Country Focused Training for TVE Trainers: IAT Intermediate	Azerbaijan	12	12	0	3-week	13.10.2014	Pzt	31.10.2014	Cum	
9 Country Focused Training for TVE Trainers: IAT Advanced	Pakistan	10	10	0	3-week	05.01.2015	Pzt	23.01.2015	Cum	
Total			97	28						

Project Design Matrix (PDM)

Ver.1 (2013.06.11)

PROJECT TITLE: The Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries

DURATION: Year 2012-2015 (3 years)

IMPLEMENTING AGENCY: Ministry of National Education (MoNE)

COLLABORATION AGENCY: Turkish Cooperation and Coordination Agency (TIKA)

PROJECT SITE: Teacher Training Center (TTC) of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School

TARGET COUNTRIES: 1) Country Focused Training: Azerbaijan, Kazakhstan, Pakistan and 2) Group Training: Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan

TARGET GROUP: Teachers teaching IAT and related subjects in technical and vocational schools in target countries

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Super Goal: IAT human resources are developed in target countries.	IAT department is established in at least in one of the participant's institution.	Follow up survey report	
Overall Goal: Technical education and vocational training capacity on IAT of target countries is enhanced.	Trial IAT program are introduce to the participant's institution.	Follow up survey report	<ul style="list-style-type: none"> A decision was taken by the local government for the establishment of the IAT department
Project purpose: Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.	<p>A.Kazakhstan:</p> <ol style="list-style-type: none"> TVE administrators are aware of what and how to introduce IAT program into the TVE. At least 4 TVE college are selected as IAT pilot college At least 3 teachers from each college become capable of teaching basic and intermediate IAT course as team. Basic level IAT course program and teaching material are developed based on the training at TTC. <p>B.Pakistan:</p> <ol style="list-style-type: none"> TVE administrators are aware of what and how to introduce IAT program into the TVE At least 3 or more institutions are selected for the participation to training in TTC from provincial body to support the new decentralized system of TVE. At least 10 teachers are capable to teach Basic, Intermediate and advance IAT course. <p>C.Azerbaijan:</p> <ol style="list-style-type: none"> TVE administrators are aware of what and how to introduce IAT program into the TVE. At least one institution is selected as IAT pilot college. At least 10 teachers are capable to teach Basic and Intermediate IAT course. <p>D.Group Training target countries</p>	<p>A. Kazakhstan:</p> <ol style="list-style-type: none"> Follow up survey report Follow up survey report Course implementation reports Course implementation reports <p>B.Pakistan:</p> <ol style="list-style-type: none"> Course implementation report, follow up survey report Course implementation report Results of course evaluation <p>C.Azerbaijan:</p> <ol style="list-style-type: none"> Course Implementation report, follow up survey report Course implementation report Results of course evaluation <p>D.Group Training target countries</p> <ol style="list-style-type: none"> Course implementation report, follow 	<ul style="list-style-type: none"> Equipment are purchased by the participant institution IAT Curriculum are approved by the target country Ministry of Education

	<ol style="list-style-type: none"> 1. TVE administrators are aware of the importance of the IAT. 2. At least 10 teachers become capable of teaching basic IAT course 	<ol style="list-style-type: none"> 1. up survey report 2. Results of course evaluation 	
<p>Outputs</p> <p>1. Training for target group is appropriately planned.</p>	<ol style="list-style-type: none"> 1. Appropriate training targets are set for each country focused training country. 2. Appropriate training targets are set for group training. 3. Appropriate training plans are prepared for each of three country-focused training group countries and for group training. 	<ol style="list-style-type: none"> 1. Agreement document prepared with each country during the Need Survey 2. Project progress reports 3. Project progress reports 	<ul style="list-style-type: none"> • As results of the need survey in CFT target countries, local government agreed the target institution and content recommended by the survey team.
<p>2. Training for target group is effectively provided.</p>	<ol style="list-style-type: none"> 1. Each course achieves more than 60% in average of the participant's course evaluation. 2. At least 80% of participants in country focused training achieve the 70 % of the learning performance. 3. At least 80% of participants in group training achieve the 45% of the learning performance. 	<ol style="list-style-type: none"> 1. Results of the Course Questionnaire 2. Results of the Course achievement tests 3. Results of the Course achievement tests 	<ul style="list-style-type: none"> • A discussion for training content identification was implemented among the GT target countries.
<p>3. Follow-up system is established.</p>	<ol style="list-style-type: none"> 1. Web-based information system is developed, installed and introduced during the training course 2. Training impact is properly assessed in second and third year in CFT countries, identifying the degree of utilization and it affecting factors, recommendation for the improvement. 3. Training impact is properly assessed in second and third year in GT countries identifying the degree of utilization and it affecting factors, recommendation for the improvement. 	<ol style="list-style-type: none"> 1. Project progress reports 2. Follow up survey report for CFT countries 3. Follow up survey report for GT countries 	

<p>Activities</p> <p>1-1. Identify detailed training needs of each country.</p> <p>1-2. Select target institution(s) in each country.</p> <p>1-3. Establish specific project targets for each country.</p> <p>1-4. Develop/ improve training curriculum.</p> <p>1-5. Prepare/ improve training material.</p> <p>1-6. Determine training schedule.</p> <p>2-1. Select participants.</p> <p>2-2. Arrange logistics.</p> <p>2-3. Implement training.</p> <p>2-4. Evaluate training.</p> <p>3-1. Develop follow-up plan.</p> <p>3-2. Develop web-based information system.</p> <p>3-3. Conduct follow-up.</p> <p>3-4. Evaluate training impact.</p>	<p>Inputs</p> <p><u>Turkey side:</u></p> <p>1) Personnel</p> <ul style="list-style-type: none"> • Project Director (Director General, General Directorate of Technical and Vocational Education) • Deputy Project Director (Head of Department, General Directorate of Technical and Vocational Education) • Project Manager (Principal, Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School) • Project Coordinator (Teachers Training Center) • IAT Trainers (TTC) • Focal point person of TIKA <p>2) Facilities</p> <ul style="list-style-type: none"> • Office space for experts at TTC • Training facilities at TTC • ICT facilities including PC, Server, LAN and Internet. <p>3) Available data and information related to project</p> <p>4) Recurrent costs</p> <ul style="list-style-type: none"> • Supply of replacement of machinery, equipment, instruments, vehicles, tools, spare parts and other materials owned by Turkey side. • Utility and other basic expenses to run project. <p>5) Following training cost:</p> <ul style="list-style-type: none"> • Interpretation, Translation, Meeting expenses, Training material, Document printing, Excursion etc. <p>6) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Turkish side.</p>	<p><u>Japanese side:</u></p> <p>1) Experts</p> <ul style="list-style-type: none"> • Chief Advisor/ Training Management • Coordinator/ Curriculum Development • Other fields <p>2) Following training cost:</p> <ul style="list-style-type: none"> • Air fare, Transportation, Per-diem, Accommodation, Insurance etc. <p>3) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Japanese side.</p>	<ul style="list-style-type: none"> • Sufficient numbers of TTC counterparts are assigned to conduct the preparation, implementation and evaluation of the courses. • Necessary equipments and facilities are provided for the course implementation at TTC. • Sufficient PC and smooth internet connection is provided at TTC to each participant. • Necessary PC and internet connection is provided at participants institutions. <p>Pre-Condition</p> <ul style="list-style-type: none"> • Target countries participate in project. • MONE's decision to provide international training on IAT to the neighboring countries doesn't change
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Table of the activities and required personnel for TTC

Ver.1, June 8th 2013

No	Activity	Content	MM	Person	Subtotal
1	TCTP (GT)	Preparation 4w, Implementation 4w, Evaluation and reporting 2w of 3 Courses	7,5	2	15
2	TCTP (CFT)	Preparation 4w, Implementation 4w (except Pakistan is 3w), Evaluation and reporting 2w of 3 Courses	7,25	2	14,5
3	Curriculum/Material Development	Development/Revision of 3 courseware program (2month x 3 courses)	6	2	12
4	In-Service training program	14 courses for 2013, total of 19 Weeks	5	2	10
5	Web Based Training Support System	Development 1MM + participant support 480 hours (2h x 40w x 6 courses)	4	1	4
6	Project Management	Planning, Administration of the entire activity, evaluation and reporting	6	1	6
7	Coordination	Coordination, official procedure, budgeting, document works, etc	6	1	6
8	Training of Trainers	Training by the JICA project experts	1,4	7	9,8
Total Required MM of work					77,3
Total Required number of Staff					7,0

Note:

1. Base on the calculation of the 47 Week per year (Excluding holidays and 1 month vacation), 8 Hours per day.
2. 1MM (Man/Month) is equivalent to 1person/month. 1 month is calculated by average of 20 working days.

**MINUTES OF MEETING
OF
THE FIFTH JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IATE)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES IN THE REPUBLIC OF TURKEY**

Agreed upon between

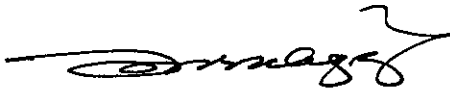
Ministry of National Education,

Turkish Cooperation and Coordination Agency

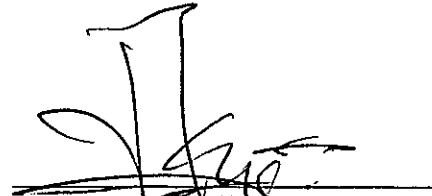
and

Japan International Cooperation Agency

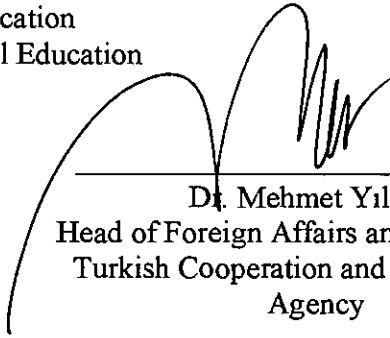
Ankara
8th November, 2013



Assoc. Prof. Ömer Açıkgöz
General Director
General Directorate of Vocational and
Technical Education
Ministry of National Education



Dr. Takujiro Ito
Chief Advisor
JICA Expert Team



Dr. Mehmet Yılmaz
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

The Fifth Joint Coordinating Committee (hereinafter referred to as the "JCC") Meeting on the Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey (hereinafter referred to as "the Project") was held on November 8, 2013, at a conference room of the King Hotel Güvenlik, Ankara, with participation of representatives of Ministry of National Education (hereinafter referred as "MoNE), Turkish Cooperation and Coordination Agency (hereinafter referred as "TIKA") and Japan International Cooperation Agency (hereinafter referred as JICA) as well as Japanese Expert Team, Turkish Staff of Teacher Training Center (hereinafter referred as "TTC") and observers from related departments (For detail of the attendants, refer to Annex 1).

The results of discussions which were followed by the participants along the agenda (refer to Annex 2) have been summarized as follows:

1. Explanation of the Agenda

Agenda of the meeting was briefly explained by Mr. Yücel Yüksel, Head of Department of MoNE.

2. Opening Remarks

In order to spend enough time for the discussion topics, the JCC members decided to skip the opening remarks and started the following topics of the agenda.

3. Presentation and Discussion on the Project Issues

(1) Summary of the Progress of the Project

Mr. Yücel Yüksel summarized the progress of project activities. In 2013, one Group Training (hereinafter referred as "GT") for Russian language, was conducted in April; and three Country Focused Training (hereinafter referred as "CFT") Courses for Kazakhstan, Azerbaijan and Pakistan were conducted. Total of 48 participants were planned to be invited for the training and 42 participants attended. For both training programs, curricula and materials were developed with the help of Mr. Hideki Kumagai, JICA Expert. Also IAT equipment, which is used in the training programs, was donated to MoNE from JICA. The total expenses for the equipment were 157,000TL. The donation ceremony was conducted on November 4th with the opening ceremony of CFT for Pakistan.

Assoc. Prof. Ömer Açıkgöz from MoNE commented that the evaluation of the courses must be presented and quality of the program must be evaluated. Also he mentioned that the visibility of the project is not clear, and he emphasized the needs of assessment of the training and analysis of the result. In addition, he suggested that interviews should be done for candidate selection. The selection of the candidates is the key for better training and he explained that the interviews are done in other training programs.

Dr. Mehmet Yılmaz from TIKA replied that the points mentioned by Assoc. Prof. Ömer Açıkgöz were very important. Then, he explained the difficulties of candidate selection TIKA is facing. For example, late submission of the application forms from Pakistan course, change of top manager in Azerbaijan and difficulties to get their commitment. Addition to this, TIKA is in position to invite the candidates from target countries, thus,



TIKA cannot negotiate strongly. Some countries bargain on candidates, and claim that they will not send any trainees if we do not accept their candidates.

Regarding the visibility of the project, he also agreed that promotion activity must be strengthened. In terms of international cooperation, those project activities are very essential to support Central Asia and Middle Eastern countries. He said that as for opening ceremony of the project, we had invited ambassadors of the target countries; we should invite those people for main events and also media to make the project more visible.

Mr. Yücel Yüksel added explanation about the evaluations conducted after the trainings. After each course, course reports are prepared by TTC Trainers and shared. In addition, follow-up through web based system is conducted. Assoc. Prof. Ömer Açıkgöz asked if the project has platform on the web for those activities. Mr. Egemen Döğer, TTC Trainer, replied that they have developed the platform on the web.

Dr. Emin Özdamar from JICA shared his idea that not all the candidate selections have problems. Problematic one is mainly for group trainings and also faced difficulties on CFT for Azerbaijan. CFT's for Pakistan and Kazakhstan are going well.

Regarding the evaluations of the training courses, Dr. Takujiro Ito, the Project Chief Advisor, added that most of the previous year reports does not include the analysis on the performance of the trainings since last year trainings were mainly for high rank officers and administrators. For the technical trainings, evaluation tools are created based on Kirkpatric Evaluation Model and assessments are made. We are conducting questionnaire for participants to measure the satisfaction of the participants, Pre and post test to measure objectively the achievement of the knowledge and skill, evaluation of the "Project work" (Integrated exercise) to measure the general performance of the learning, and we are conducting the assessment of the application of the results of the training in the participants countries. This information will be included in the annual progress report and presented in next JCC.

Assoc. Prof. Ömer Açıkgöz summarized that project output, the quality of the trainings, need to be evaluated based on certain criteria and result must be discussed again.

- (2) Proposing modification of the project schedule 2014-2015 and (3) Proposing modification for the 2014 Azerbaijan CFT candidates

Mr. Gürcan Bildir, TTC Trainer, presented his presentation on proposal for modification of the course schedule and 2014 Azerbaijan CFT candidates (refer to Annex 3). First, he proposed to modify the schedule for GT for English language, one in January 2014 and another in November 2014. Since those courses were originally planned consecutively, one in December 2013 and another in January 2014. In order to do so, GT for Russian



language, which was planned in November 2014, will be moved to December 2014 (refer to Annex 4-a and 4-b).

He explained that to improve the quality of the training course, some preparation period will be needed between the courses. During the preparation, past training courses would be analyzed well and those feedbacks will be applied to the future courses. In addition, he raised the challenge they are facing in TTC that the number of the counterparts had decreased from seven people to five. In order to compensate the loss of personnel, more time for preparation will be essential, and at the same time, it is crucial for recruiting the new personnel.

Second, he explained the comparison analysis they did for CFT countries. For Pakistan and Kazakhstan, both governments have commitment to our training program and sending appropriate trainees. The differences between two countries are that Pakistan has curriculum on IAT, however does not have enough budget for equipment; and Kazakhstan does not have curriculum, however the government has enough budget to buy equipment and is willing to develop IAT department in their country. Among CFT target countries, Azerbaijan has the serious challenge.

Mr. Yücel Yüksel explained that the Azerbaijan Minister had changed recently; however, they seemed to need our support regarding IAT.

Dr. Mehmet Yılmaz shared his comment that even when they conducted survey in Azerbaijan, their needs and plans were not clear, and the Minister had changed 3 months ago. He emphasized that if the government does not have ownership and commitment to the program, we should think to remove them from the target.

Mr. Gürcan Bildir, mentioned, instead of excluding Azerbaijan from the training, it would be better to treat them as Group Training, and conduct IAT Basic with new candidates. He explained that 12 trainees were planned for the IAT Basic course in September; however, only 9 trainees participated. Among 9 trainees, 8 were deputy principals, and 4 trainees were the people who had training before in TTC.

Dr. Takujiro Ito also added that during the need survey, he met with the General Director of Ministry of Education in Azerbaijan, and General Director requested to the survey team the donation of the equipment saying that ministry lacks budget because the government is prioritizing the improvement of the infrastructure in this moment and not for education. Dr. Ito explained that they can provide technical trainings but cannot provide any equipment. In addition, since Azerbaijan has high GDP per capita, JICA and also TIKKA cannot provide support for purchasing the equipment. Project team suggests to keep Azerbaijan as CFT, but to conduct IAT Basic for new trainees.

Dr. Mehmet Yılmaz corrected that TIKKA changed the policy and they are capable of supporting Azerbaijan for equipment. However, if they don't have the intention to utilize equipment, it would be very difficult.



Assoc. Prof. Ömer Açıkgöz commented that diplomatically we need to receive Azerbaijan trainees, and down grade the level of the training to IAT Basic.

Mr. Gürcan Bildır continued that IAT Basic course is 4-week course and IAT Intermediate is 3-week course. In order to match the budget, we recommend reducing the number of people from 12 to 10 persons. Assoc. Prof. Ömer Açıkgöz said that the idea seems acceptable.

Mr. Akio Saito from JICA raised a question, whether an agreement paper regarding training program between Azerbaijan government and MoNE or project team exists.

Dr. Takujiro Ito answered that it is not official agreement, however, during the need survey, they have signed and submitted a report to the Ministry of Education in Azerbaijan. Thus, it is essential to take official procedure such as to send a letter explaining the reasons of the changes to be made and get their consensus.

Assoc. Prof. Ömer Açıkgöz agreed to send letter as JCC to explain the reasons and the changes to be taken. By doing so, he said that Azerbaijan government will be aware of the problem.

Dr. Takujiro Ito pointed out that Azerbaijan government may object about reducing the number of trainees. He asked that in that case, if there are some possibility of increasing the budget to receive originally planned 12 participants.

Assoc. Prof. Ömer Açıkgöz replied that it would be difficult. Also Mr. Akio Saito commented that if the reasons were explained logically, they will be able to accept the situation. Dr. Mehmet Yılmaz added it would be better to consult face to face. After draft is prepared by the project team and approved by JCC members, TIKa will send the coordinator to explain the matter to the appropriate person in Azerbaijan.

(3) Result of Follow-up and Strategy to Increase the Impact of the Training

Mr. Egemen Döğer, TTC Trainer, presented the topics regarding results of follow-up and strategy to increase the impact of the training (refer to Annex 5). First, he explained the purpose of follow-up that to support applications of what trainees have learned in Turkey. Second, the method of follow-up, especially by using WBTSS (Web-Based Training Support System) and by emails. Third, he shared the results of the follow-up: for Pakistan and Kazakhstan, some impacts have been reported. For Pakistan, some trainees have sent back their progress reports, and reported about seminars they have conducted, equipment that they have purchased in their school etc. For Kazakhstan, establishment of the IAT department seems to be in procedure. Unfortunately, no progress has been reported from Azerbaijan. Forth, he explained about challenges they are facing regarding follow-up. He mainly pointed out 4 challenges: language problems, condition of internet connection in their home countries, technical problems and communication difficulties with trainees. Especially for last challenge, he explained that in Kazakhstan, strong hierarchy exists and trainees may not be able to reply emails easily. They never had got reply from Kazakhstan. Lastly, he proposed the on-site follow-up in target countries by TTC trainers.



Dr. Emin Özdamar asked whether the budget for on-site follow-up is planned. Dr. Takujiro Ito replied that no budget is secured for on-site follow-up from the project. However, he emphasized the importance of the on-site follow up. He explained that 2-week follow-up by 4 TTC Trainers to 4 pilot schools in Kazakhstan during September 2014 would be convenient, since those schools are planning to purchase and setup IAT equipment to start the pilot program in September 2014, however, they do not have enough knowledge to manage the department by their own yet. If TTC Trainers could provide support to them, that will enhance the possibility of achievement of the overall goal.

Ms. Miyuki Konnai, Project Formulation Advisor from JICA, raised a question regarding follow-up in Pakistan. Dr. Takujiro Ito explained the situation of the Pakistan training program. He mentioned that during need survey, Pakistan government agreed to send trainees from NTB (National Training Bureau), central institution in Islamabad, and from TEVTA in Lahore, one provincial institution. However, de-centralization of the government seemed progressed faster than they have expected, and the government sent several trainees from other provincial institutions. In Pakistan, NTB has already their IAT curriculum, however for the new provincial institutions, IAT curriculum does not exist. Thus, there are different needs in Pakistan trainees that was not expected at the moment of the need survey.

Mr. Akio Saito added that they have consulted with JICA Pakistan office for the possibility of supports for the equipment. However JICA only can provide the support after termination of the project. Ms. Miyuki Konnai also mentioned that there is difficulty to choose which school to provide the equipment with. Then, Dr. Takujiro Ito searched for any possibility from TIKA. Dr. Mehmet Yılmaz replied that they need to consult with their local offices.

Assoc. Prof. Ömer Açıkgöz from MoNE summarized that for the conclusion for the topic, further discussions among each organization are needed.

4. Discussion on the continuity and sustainability of the TTC (1) Situation of the TTC and Its Potential

Mr. Egemen Döğer presented his presentation on situation of the TTC and its potential (refer to Annex 6). First, he presented about high potential for industrial process automation and control market. He mentioned the total cost of the world market in 2013 was calculated to be 69 billion US dollars. He described that all the industries such as power generation, transmission, manufacturing, transportation, storage, building, process and distributions need automation and control technologies. Then, he explained the experience, know-how and skills of TTC, which accumulated through 13 years of international and national training projects. Lastly, he proposed following services that TTC can offer in the future: IAT application training for different sectors, supports for the development of new international projects, provides international training for vocational and technical education, and third country consultancy service.



Assoc. Prof. Ömer Açıkgöz commented that he understood well that good infrastructure and experience exist in TTC.

(2) Presentation of the Idea of General Directorate for the Effective Utilization of the TTC

Assoc. Prof. Ömer Açıkgöz continued and shared his idea to transfer the project to Ankara for the next stage of the project. He explained that logistic of the project will be much easier in Ankara to support the project directly and easier to make it visible.

Dr. Mehmet Yılmaz expressed his understanding to Assoc. Prof. Ömer Açıkgöz comment and he said that he needs to hear the idea from Japanese side.

Dr. Takujiro Ito asserted that moving the equipment and classrooms to Ankara is not difficult; however, there are things which cannot be moved easily. For example, experience and know-how accumulated in the trainers as well as relationship between industries, which were built through time and efforts by the project team. He also mentioned that the original idea to have projects in Izmir when MoNE, TIKa and JICA discussed before the start of the project was probably because Izmir is one of the industrial zone in Turkey and there is the market of the human resource for the Automation Technology. With collaboration with those companies, TTC had been conducting practical training programs. It would be difficult to have same output with new centre in Ankara.

Mr. Akio Saito also pointed that there is tangible assets and intangible assets. He explained the needs of identification of the assets the project possesses. At the beginning, JICA agreed to start this project in Izmir because the government of Turkey decided; and since the project has been working in Izmir at Mazhar Zorlu Technical and Vocational School for long years, it should be better to stick to the idea". He also added that Izmir is one of the candidate cities of the 2020 Expo. If Izmir would be chosen as a host, then it would be great opportunity to make the project visual.

Dr. Takujiro Ito shared other information on the demand for automation in oil industry, which Japanese company with other international companies has recently signed the agreement to build new and biggest oil refinery of Turkey in Izmir.

Assoc. Prof. Ömer Açıkgöz showed their understandings to those comments.

Then, he asked if there is any other topic to be mentioned before leaving of him and Dr. Mehmet Yılmaz.

Mr. Aydın Dođmuş, Acting-Principal of Konak Nevvar Salih İşgören Hotel Management and Tourism Vocational High School, commented that they started providing service for international training from November and he said that they are eager to improve their service as much as possible. Dr. Takujiro Ito mentioned one serious challenge they are facing in TTC. He explained that since kitchen facilities in TTC is not enough, they need to prepare the food outside and bring to TTC. Thus, the kitchen facilities need to be installed to TTC for smooth implementation of the training programs.



Ms. Miyuki Konnai pointed out about shortage of the human resources in TTC. She said that 2 counterparts left the project from September, thus, some actions should be taken. Mr. Yücel Yüksel replied this matter will be consulted again in MoNE.

Dr. Mehmet Yılmaz opened the discussion regarding length of the training periods. He mentioned that in the Course Reports, some trainees noted that the training periods are too short. Mr. Yücel Yüksel replied that IAT is very complex subject, and for in-service training in Turkey, 6-months course is provided. Thus, some trainees commented that the training periods were too short to understand everything about IAT. Dr. Mehmet Yılmaz agreed to his explanation.

5. Confirmation and approval of the PDM indicators

(1) Presentation of the Draft Indicators

Dr. Takujiro Ito explained the proposal for the modification of the PDM. He mentioned about objectively verifiable indicators for Output 1, 2 and 3. Regarding Output 1, the team proposed to separate indicators for CFT and GT. In the PDM version 1, the indicator was mixed for CFT and GT. Regarding Output 2, the team proposed to make modifications for indicator 1 and 3. For indicator 1, the team proposed “70% of the course participants are satisfied in term of course content, course management and accommodation services in GT courses and CFT courses,” to clarify the criteria to evaluate satisfaction of the participant. For indicator 3, the team proposed “At least 80% of participants in GT achieve the 70% of the learning performance,” which the proposal was to increase the achievement criteria for GT in indicator 3. He explained that the team has the confidence of achieving these criteria after conducting GT for Russian language. For Output 3, the team proposed to delete the indicator 3 in PDM version 1, “Training impact is properly assessed in second and third year in GT countries identifying the degree of utilization and its affecting factors, recommendation for the improvement.” Because, the team did not get any reply from GT trainees. Dr. Ito explained that they actually do not have responsibility or obligation to reply to this kind of activities. He shared the same difficulties he faced for JICA trainings. He summarized that if we leave the indicators, the project need some additional input to achieve this goal.

(2) Discussion and Finalization of the PDM Indicators

Mr. Akio Saito raised his objection to delete the indicator 3 for Output 3. He asked any possibility to conduct follow-up. Mr. Egemen Döğler, explain the situation of previous GT and mentioned that it is difficult to see clear impact by conducting one-time training.

Dr. Emin Özdamar raised another point. He mentioned that it was decided to conduct IAT Basic training for Azerbaijan next year as well, thus, the PDM needs to be corrected. In addition, for the GT target countries especially, Kyrgyzstan, Tajikistan and Uzbekistan, there were shortage of the participants to the trainings, thus, the number must be corrected. The project team replied that it will be corrected.



Assoc. Prof. Ömer Açıkgöz apologized for the interruption; he and Dr. Mehmet Yılmaz from TIKA had to leave for next appointment. He kindly requested to continue for the remaining discussion and the Minutes of the Meeting should be prepared later and circulated for confirmation. Dr. Takujiro Ito responded that it will be prepared by next week.

The discussion about PDM indicators continued with remaining JCC members: Mr. Yücel Yüksel from MoNE, Ms. Ayşe Örün from TIKA, Mr. Egemen Döğter and Mr. Gürcan Bıldır from TTC, Mr. Akio Saito, Dr. Emin Özdamar and Ms. Miyuki Konnai from JICA, Dr. Takujiro Ito and Ms. Mami Fujishima from Japanese Expert Team and observers from MoNE.

Regarding the third indicator for Output 3, responding to the Mr. Akio Saito's recommendation to not exclude the indicator, Dr. Ito asked if the support would be possible from TIKA, since the follow-up by TTC through the Web-Based Follow-up System has limitation for getting the responses from the ex-participants. Ms. Ayşe Örün replied that TIKA local offices could be able to provide some support; however the workload must be decreased by conducting follow-up activities once or twice rather than conducting every 6-month after the training.

Dr. Ito agreed and also suggested to include TIKA's activities in the activities of PDM. He added that TTC team will prepare the necessary questionnaire and will send to TIKA, and TIKA could deliver that questionnaire through the local offices at the survey target countries and collect the responses.

Concluding the discussion on the PDM indicators, Dr. Ito confirmed that the revised PDM will be prepared and circulated with the Minutes of the Meeting (refer to Annex 7 for the revised version).

6. Other Topics

(1) Printing of Textbooks in Three Languages

Mr. Egemen Döğter explained that TTC trainers received so many requests from the trainees to provide the text books of the courses, since in this moment the project is providing only handouts and soft data of the materials. The present budget is only enough to print evaluation tools such as Pre & Post Tests, Feedback Sheets, Questionnaires and Evaluation Sheets. He asked if there is any possibility for the printing of textbooks of IAT Basic, Intermediate and Advance Levels, in three different languages: Turkish, English, and Russian.

Dr. Emin Özdamar agreed the idea of publishing course documents in the form of books. He replied that once it is produced as book, TTC has the copyright. He asked TIKA if they can support budget for the printing activities. Dr. Ito also added if the budget for the equipment of TIKA could be used.

Ms. Ayşe Örün replied that she needs to check with related personnel in TIKA, but it sounds possible.



Mr. Gürcan Bildir also added that if we have printed textbooks, the project could send them to ex-trainees as a part of follow-up.

Mr. Yücel Yüksel commented that he would also check with related personnel in MoNE for possible support that they can provide. He mentioned that the materials could be printed at MoNE's printing house in Buca. Dr. Ito commented that somebody has to cover the cost for Ink and paper, since MoNE's printing house will not cover the cost of the materials. He suggested that JICA could cover the cost for outsourcing layout design and graphics, TIKA could cover the cost of ink and papers and MoNE could print the materials. JCC members agreed for the suggestion and will make necessary procedure in their own organization.

Ms. Ayşe Örün asked TTC project team to provide the necessary information about the number of pages, so she could calculate the cost and make necessary procedure in TIKA. Mr. Egemen Döğër agreed to provide the necessary information.

(2) Needs of Improvements in TTC Guesthouse

This topic was discussed before; thus the topic was skipped from the discussion.

(3) Cooperation Possibilities with Universities

Dr. Takujiro Ito proposed to conduct 1-week survey on IAT education institutions during next February 2014, which will also be training for the TTC trainers. The purposes of the survey are: to collect information regarding institutions, which provide IAT pre-service training programs especially in Isparta and Istanbul, to search for future possibility of collaboration with those universities, and capacity development of the survey skills of the counterparts. He mentioned that TTC could provide in the future, project-base practical training for university students taking the IAT course. He asked if it is possible for MoNE to cover the expenses for counterparts such as accommodation, transportation and perdiem.

Mr. Yücel Yüksel replied that it would be possible. Dr. Takujiro Ito said TTC team will prepare the detailed plan for the survey and submit to MoNE for the necessary procedures.

(4) Advance Training Needs of TTC Trainers

Mr. Egemen Döğër expressed their needs of extra inputs regarding technical knowledge especially on IAT design and IAT integration to develop better training programs as these topics are included in the intermediate and advanced level courses. He proposed if it would be possible for them to receive practical trainings in the factories or from engineers.

Mr. Yücel Yüksel replied that MoNE cannot pay money to private companies for teacher trainings. Then, he asked if they have particular company in Izmir, which they want to receive training from.



Mr. Egemen Döğer answered that companies in Izmir, which TTC work with, are companies producing products and not providing engineering solutions. The aim of the trainings is to be able to design automation and be able to provide technical advice on that. He gave example of one company in Japan, Shinko Engineering Research Corporation. Dr. Takujiro Ito added that Mr. Hideki Kumagai, who came to Izmir last June as JICA Expert, is actually an IAT engineer who has rich experience for evaluating the needs of factories and provide engineering solutions for factory automation.

Dr. Emin Özdamar replied that if MoNE can provide official letter for the request, there is possibility for JICA to consider about the matter. Mr. Yücel Yüksel said the letter will be prepared.

(5) Others

Dr. Emin Özdamar raised another question if new persons will be assigned to TTC, because the number of the counterparts had decreased from 7 to 5.

Dr. Ito Takujiro suggested if there is any possibility to assign young teachers to TTC as trainees for their training. It would be similar to in-service trainings; however, it would be for certain period of time, throughout the year. If they can stay 1-year, they would be able to learn many things about IAT and be able to support our activities.

Mr. Egemen Döğer also added explanation about difficult conditions to work as TTC Trainers. He mentioned that compared to the high school teachers, TTC trainers have more workload, but less salary. Thus, he said not many teachers are willing to work for TTC.

Mr. Yücel Yüksel replied the matter will be discussed once again in MoNE to find the solution.

The meeting was closed by the Closing Remarks by Mr. Yücel Yüksel. Dr. Takujiro Ito agreed to prepare the draft of Meeting Minutes and send it for confirmation within one week.



Attendance List for 5th JCC Meeting

JCC Members, Turkish side

No.	Name	Position	Affiliation
1	Ass. Prof. Ömer AÇIKGÖZ	Director General	GD of Vocational and Technical Education, MoNE
2	Dr. Recep ALTIN	Head of Group	GD of Vocational and Technical Education, MoNE
3	Mr. Yücel YÜKSEL	Head of Department	GD of Vocational and Technical Education, MoNE
4	Dr. Mehmet YILMAZ	Head of Foreign Affairs and Partnerships Department	Turkish Cooperation and Coordination Agency
5	Ms. Ayşe ÖRÜN	Expert	Turkish Cooperation and Coordination Agency
6	Mr. Hasan KORKMAZ	Acting Principal	Mazhar Zorlu Technical and Vocational High School
7	Mr. Egemen DOĞER	Head of IAT department	Mazhar Zorlu Teacher Training Center
8	Mr. Gürcan BILDIR	Coordinator of Project	Mazhar Zorlu Teacher Training Center
9	Mr. Aydın DOĞMUŞ (Observer)	Acting Principal	Konak Nevvar Salih İggören Hotel Management and Tourism Vocational High School
10	Mr. Ömer İNAN (Observer)	Head of Group	GD of Human Resources, MoNE
11	Mr. Mehmet Ali AKDAĞ (Observer)	Head of Group	GD of European Union and Foreign Relationships, MoNE
12	Ms. Aslıhan TEZEL (Observer)	Head of Group	GD of European Union and Foreign Relationships, MoNE
13	Mr. M. Akif ERTÜRKMEN (Observer)	Expert	GD of Teacher Training and Development, MoNE
14	Ms. Nigar ERDEM (Observer)	Expert	GD of Vocational and Technical Education, MoNE

JCC Members, Japanese Side

No.	Name	Position	Affiliation
1	Mr. Akio SAITO	Chief Representative	JICA Turkey Office
2	Ms. Miyuki KONNAI	Project Formulation Advisor	JICA Turkey Office
3	Dr. Emin ÖZDAMAR	Senior Program Officer	JICA Turkey Office
4	Dr. Takujiro ITO	Project Chief Advisor	JICA IATE Project Expert Team
5	Ms. Mami FUJISHIMA	Project Coordinator	JICA IATE Project Expert Team



Industrial Automation Technology Extension Project for Central Asian and Middle East Countries

MoNE-TIKA-JICA Cooperation Project
Mazhar Zorlu Technical and Industry Vocational High School Teacher Training Center
Mevlana Mah. 1776 Sok. No: 2/2 Bornova - İZMİR TURKEY
Tel & Fax: +90 232 342 7043



Ministry of National Education
Republic of Turkey

The Fifth Joint Coordinating Committee Meeting

Date : Nov. 8, 2013 (Friday)
Time : 10:00 – 12:00
Venue : King Hotel Güvenlik (Kavaklıdere Mahallesi, Güvenlik Caddesi No:13)
Chair : Ass. Prof. Ömer AÇIKGÖZ
Moderator : Mr. Yücel YÜKSEL

Agenda:

1. Explanation of the Agenda by Mr. Yücel YÜKSEL (2 min.)
2. Opening Remarks
 - (1) Ass. Prof. Ömer AÇIKGÖZ, DG of Vocational and Technical Education, MoNE (5 min.)
 - (2) Mr. Akio SAITO, Chief Representative, JICA (5 min.)
 - (3) Dr. Mehmet YILMAZ, Head of Foreign Affairs and Partnerships Department, TIKA (5 min.)
3. Presentation and discussion on the project issues
 - (1) Summary of the progress of the project, by Mr. Yücel YÜKSEL (5 min.)
 - (2) Proposing modification of the project schedule for 2014-2015, by Mr. Gürcan BİLDİR (10 min.)
 - (3) Proposing modification for the 2014 Azerbaijan CFT candidates, by Mr. Gürcan BİLDİR (10 min.)

Break (10 min.)

- (4) Results of follow up and strategy to increase the impact of the training, Mr. Egemen DOĞER (10 min.)
4. Discussion on the continuity and sustainability of the TTC after the finalization of the project
 - (1) Situation of the TTC and its potential, by Mr. Egemen DOĞER (10 min.)
 - (2) Presentation of the idea of General Directorate for the effective utilization of the TTC, by Dr. Ömer AÇIKGÖZ (10 min.)

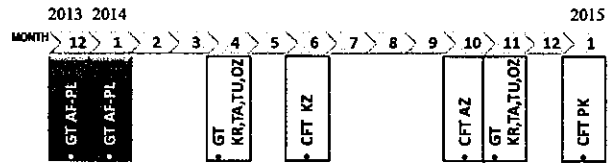
Break (10 min.)

5. Confirmation and approval of the PDM indicators (10 min.)
 - (1) Presentation of the draft indicators by Dr. Takujiro ITO
 - (2) Discussion and finalization of the PDM indicators
6. Other Topics if Necessary, Upon the Proposition of JCC Members (printing of textbook in three languages, needs of improvements in TTC guesthouse, cooperation possibilities with universities, advance training needs of the trainers (C/Ps), etc.)

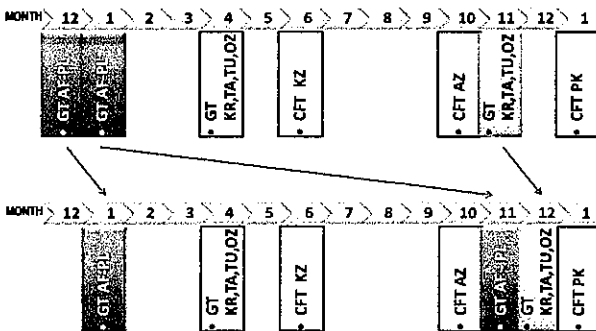
Proposing modification of the Course Schedule & 2014 Azerbaijan Candidates

Gürcan BILDIR, Coordinator

Current Course Schedule



Proposed Course Schedule



Analysis of CFT Countries

	PAKISTAN	AZERBAIJAN	KAZAKHSTAN
COMMITMENT	○	△	○
CURRICULUM	○	X	△
BUDGET	X	X	○
SUPPORT	○	X	○
School	○	X	○
Background	○	X	○
Age	△	△	○
Motivation	○	△	○

Proposal for 2014 Azerbaijan Course

According to the result of Azerbaijan Course;

- Pilot school selection have not been done so far.
- They did not follow agreement of need survey regarding the selection of participant.
- Age and background of some participants were not suitable for the course.



TTC proposes to conduct IAT Basic course with new participants rather than to invite same participants to conduct IAT Intermediate course.

Proposal for 2014 Azerbaijan Course

To be considered:

- Intermediate course is 3 weeks but the Basic course is 4 weeks. It mean, the cost may increase.

Suggesting idea:

- To reduce the number of participants from 12 to 10, and make same as Pakistan course.

Course Title and Course Schedule

As of November 09, 2013

Group Training Program

	Course Title	Country		Participants	Attended Participants	Days	Starting Date		Ending Date		
1	Group Training for TVE Managers	Afghanistan	2	10	2	8	2-week	2012/11/5	Mon	2012/11/16	Fri
		Kyrgyzstan	2		2						
		Palestine	2		2						
		Tajikistan	2		2						
		Turkmenistan	2		0						
2	Group Training for TVE Trainers: IAT Basic 2013 A	Kyrgyzstan	3	14	2	11	4-week	2013/4/15	Mon	2013/5/10	Fri
		Tajikistan	4		3						
		Turkmenistan	4		4						
		Uzbekistan	3		2						
3	Group Training for TVE Trainers: IAT Basic 2013 B	Afghanistan	5	10	0	4-week	2014/1/6	Mon	2014/1/31	Fri	
		Palestine	5								
4	Group Training for TVE Trainers: IAT Basic 2014 B	Afghanistan	5	10	0	4-week	2014/11/3	Mon	2014/11/28	Fri	
		Palestine	5								
5	Group Training for TVE Trainers: IAT Basic 2014 A	Kyrgyzstan	4	13	0	4-week	2014/4/14	Mon	2014/5/9	Fri	
		Tajikistan	3								
		Turkmenistan	3								
		Uzbekistan	3								
6	Group Training for TVE Trainers: IAT Basic 2015 A	Kyrgyzstan	3	13	0	4-week	2014/12/1	Mon	2014/12/26	Fri	
		Tajikistan	3								
		Turkmenistan	3								
		Uzbekistan	4								
Total				70	19						

Country Focused Training Program

	Course Title	Country		Participants	Attended Participants	Days	Starting Date		Ending Date		
1	Country Focused Training for Executive Managers	Azerbaijan	1	4	1	4	1-week	2012/11/5	Mon	2012/11/9	Fri
		Kazakhstan	1		1						
		Pakistan	2		2						
2	Country Focused Training for TVE Manager	Azerbaijan	7	15	7	14	2-week	2012/11/5	Mon	2012/11/16	Fri
		Kazakhstan	8		7						
3	Country Focused Training for TVE Trainers: IAT Basic	Pakistan	10	10	10	10	3-week	2012/12/3	Mon	2012/12/21	Fri
4	Country Focused Training for TVE Trainers: IAT Basic	Kazakhstan	12	12	12	12	4-week	2013/6/3	Mon	2013/6/28	Fri
5	Country Focused Training for TVE Trainers: IAT Basic	Azerbaijan	12	12	9	9	4-week	2013/9/16	Mon	2013/10/11	Fri
6	Country Focused Training for TVE Trainers: IAT Intermediate	Pakistan	10	10	10	10	3-week	2013/11/4	Mon	2013/11/22	Fri
7	Country Focused Training for TVE Trainers: IAT Intermediate	Kazakhstan	12	12	0	0	3-week	2014/6/2	Mon	2014/6/20	Fri
8	Country Focused Training for TVE Trainers: IAT Intermediate	Azerbaijan	10	10	0	0	4-week	2014/10/6	Mon	2014/10/31	Fri
9	Country Focused Training for TVE Trainers: IAT Advanced	Pakistan	10	10	0	0	3-week	2015/1/5	Mon	2015/1/23	Fri
				95	59						

Implementation Plan for Country Focus & Group Training Courses

No	Activities	Number of Participant	Language	NOVEMBER 2013				DECEMBER 2013				JANUARY 2014				FEBRUARY 2014				MARCH 2014				APRIL 2014				MAY 2014				JUNE 2014			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Country Focused Training Afghanistan Palestine	2014 - 10	E									← 4 W → 6 31																							
2	Country Focused Training Tajikistan Kirghizistan Turkmenistan Uzbekistan	2014 - 13 2015 - 13	R																	← 4 W → 14 9															
3	Country Focused Training PAKISTAN	2014-10	E	← 3 W → 4 22																															
4	Country Focused Training AZERBAIJAN	2014-12	T																																
5	Country Focused Training KAZAKHISTAN	2014-12	R																					← 3 W → 2 20											
5	In-service Training	40/Course	T									← 1 W → ← 4 W →																← 1 W → ← 1 W →							

No	Activities	Number of Participant	Language	JULY 2014				AUGUST 2014				SEPTEMBER 2014				OCTOBER 2014				NOVEMBER 2014				DECEMBER 2014				JANUARY 2015				FEBRUARY 2015				MARCH 2015			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
1	Country Focused Training Afghanistan Palestine	2014 - 10	E													← 4 W → 3 28																							
2	Country Focused Training Tajikistan Kirghizistan Turkmenistan Uzbekistan	2014 - 13 2015 - 13	R																	← 4 W → 1 26																			
3	Country Focused Training PAKISTAN	2014-10	E																	← 3 W → 5 23																			
4	Country Focused Training AZERBAIJAN	2014-12	T									← 4 W → 6 31																											
5	Country Focused Training KAZAKHISTAN	2014-12	R																																				
5	In-service Training	40/Course	T																																				

*Bayram 2014: July 26 (Sat) to July 30 (Wed)

*Kurban Bayram 2014: October 4 (Fri) to October 7 (Tue)

Results of follow up and strategy to increase the impact of training

Egemen DOĞER, Head of IAT Dep.



Follow up

Following trainees' activities after going back to their countries

- To support applications of what participants have learned in Turkey.
- Specifically;
 - Introduction of IAT Curriculum
 - Purchasing and setup of the equipment
 - Preparing the contents and materials
 - Conducting the pilot programs
 - Proposing the establishment of IAT department



How we Follow Up ?

- By using WBTSS (induste.com)
- By E-Mail (mziatproject@gmail.com)
- Others (JICA Kazakhstan Project for IAT)



Results of Follow-up

Following trainees' activities after going back to their countries

- They have sent some progress reports.
- They have already conducted some trainings related to our training course.
- They have started to purchase equipment (Supported for IAT equipment list).
- They have informed their Ministry about importance of training.

- They have started IAT department establishment procedures.
- They will start to give education in IAT department in schools next year.
- They have started to purchase equipment.

Azerbaijan

- During need survey, they said they will select pilot school for IAT department, but no progress yet.
- They didn't follow the conditions of agreement of need survey regarding the selection of participants.



Results of Follow-up Problems

- Language problem, especially Russian Language
 - Quick translation is needed. (Russian translator)
- Countries' Internet connection conditions.
- Technical problems because of lack of experience.
- Communication with trainees (Some countries' trainees can not reply follow up activities without permission of their authorities)
 - Need to apply official communication procedures through TIKA.

Proposing strategy

- On-site follow up by TTC trainers.

Situation of the TTC and its potential

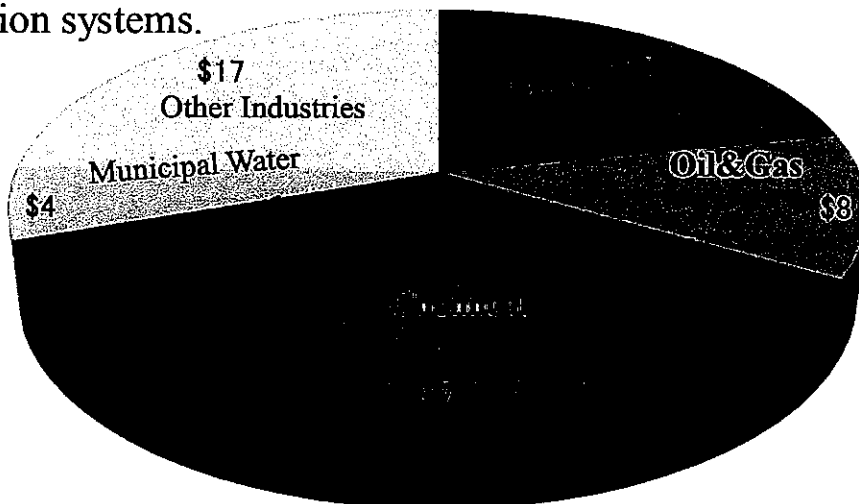
teamwork



Automation and Control Revenues

\$69 Billion Market for Industrial Process Automation and Control in 2013

In 2013, the power industry will be the biggest purchaser of automation systems.

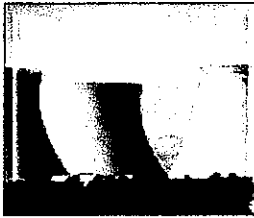


Industrial Process Automation and Control Revenues by Industry Billions \$ (2013)



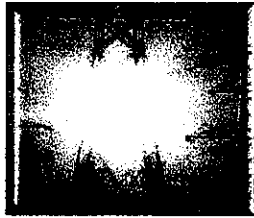
What Industry need?

Power generation



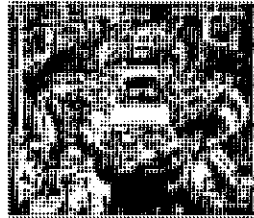
- Hydro,
- Oil,
- Nuclear,
- Wind solar
- Coal

Transmission



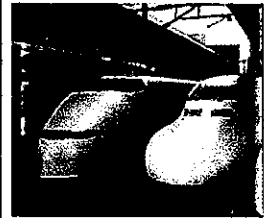
- Electricity,
- Gas,
- Oil

Manufacturing



- Flexible
- Fabrication,
- Appliances,
- Automotive

Transportation



- Sub-urban
- Trains,
- Ships

teamwork



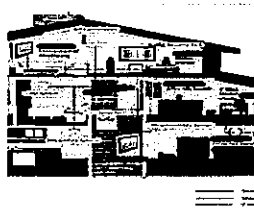
What Industry need?

Storage



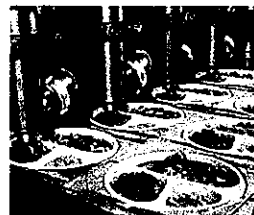
- Silos,
- Elevator,
- Harbor,

Building



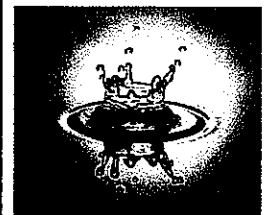
- Heat,
- Ventilation,
- air conditioning,
- Access Control,

Process



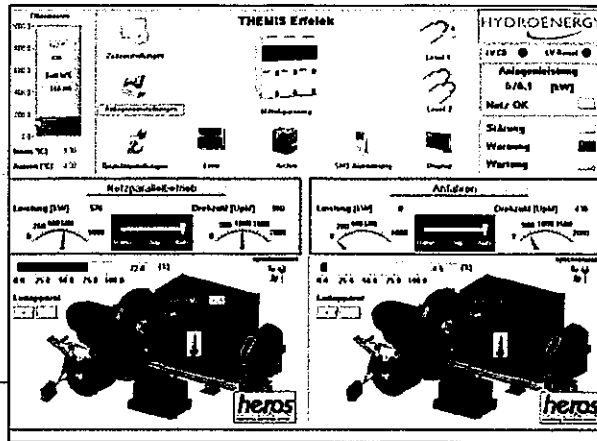
- Paper,
- Pharmaceutical
- Food,
- Metal production,

Distribution



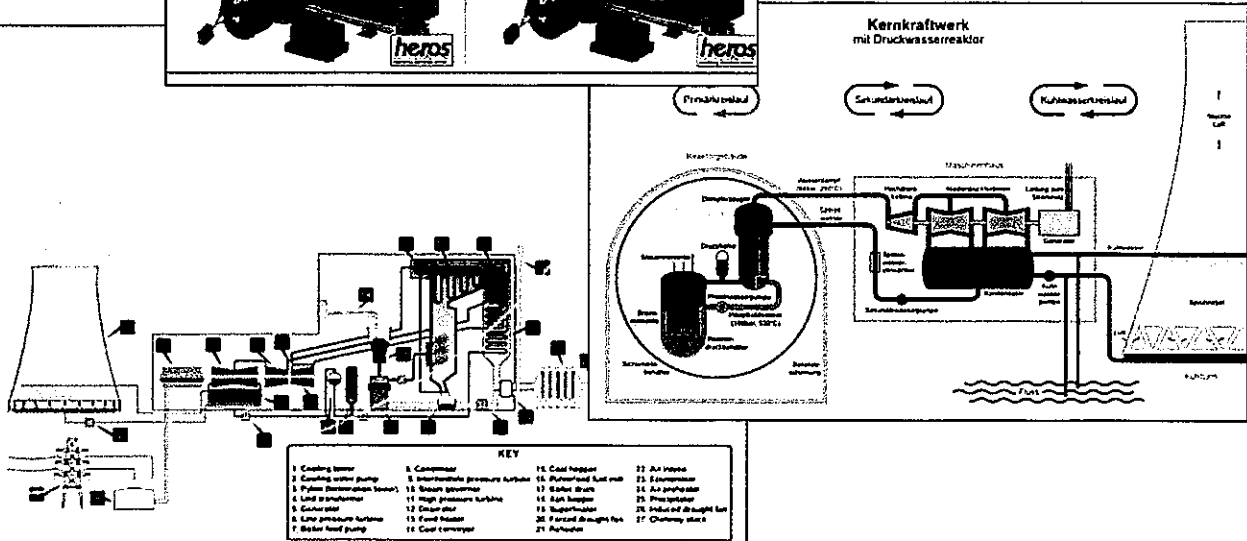
- Electricity,
- Water

teamwork



Power Plants

LOADS LISTING



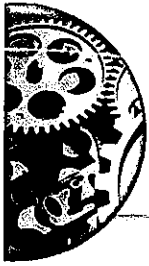
Power Plants

LOADS LISTING

Points at nuclear plants conducive to wireless technology use

Nuclear plant system	Wireless measurement(s)	Application
Heat Exchangers	Temperature	Monitor ambient temperature to take into account the effects of such factors as seasonal changes in weather.
Secondary Side Valves	Position Indication	Replace periodic, labor-intensive valve indication readings with continuously monitored wireless measurements.
Inlet Water intake	Level, Temperature, Flow	Monitor factors that affect performance such as changes in level, seasonal temperature variations, and intake flow.
Rotating Equipment (pumps, valves, motors, compressors, fans)	Temperature, Vibration, Motor Current	Monitor temperatures, vibration signatures, and load fluctuations to assess condition and improve performance.
Diesel Generators	Temperature, Level, Vibration, Motor Current	Augment existing sensor readings to provide redundancy and comprehensive performance assessment.
Spent Fuel Dry Cask Storage	Temperature, Radiation	Eliminate need for underground cabling and conduit by monitoring temperature and radiation with wireless sensors.
Weather Station	Temperature, Wind Velocity, Pressure, Humidity, etc.	Improve monitoring by replacing failure-prone equipment and cabling with wireless measurements.

teamwork



What TTC has

Experiences

- International projects (JICA, Rainova, EU, WB etc.)
- 13 years of experiences by working with foreign experts
- More than 45 Japanese Experts contributed the development of high standart training curriculum, materials and knowhows
- National in-service-training courses for 1350 teachers
- International training courses for 9 countries
- Consultancy for the local industries on introduction of automation system
- Partnership with foreign suppliers and developers (SMC International Spain, Tknika Spain, Shinko Japan, SMC-ENTEK)

teamwork

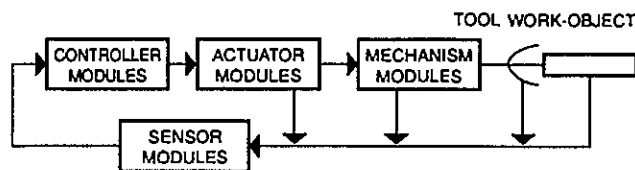


Technologies

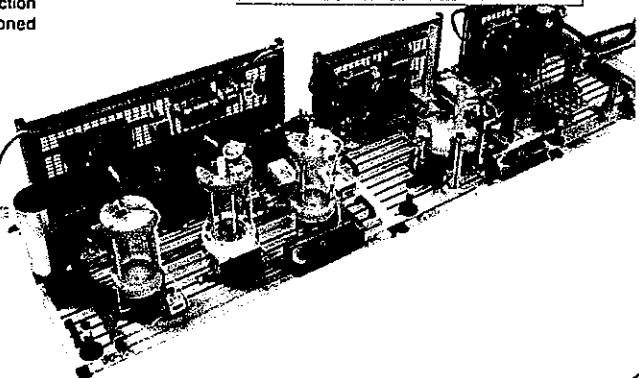
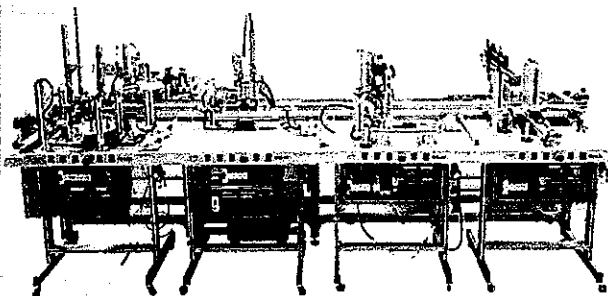
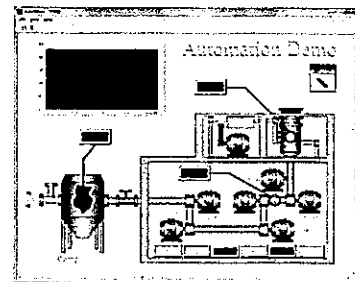
FROM "MEANS-ORIENTED TRAINING" TO "PURPOSE-ORIENTED TRAINING"

FLEXIBLE COMBINATION OF AUTOMATION ELEMENTS

The automation elements are classified into the following four groups.



The Automation System Composer, MM3000 series is designed to allow selection and combination of wide variety of elements belonging to the abovementioned four groups.



teamwork



Proposing
LLOBOZILU

TTC can offer following services.

- ❑ Application training for different sectors (Energy, transport, industry, disaster prevention, etc.)
- ❑ Supporting the development of new international projects.
- ❑ Providing international training for vocational or technical education. (e.g. Tourism, IT, Electronics, IAT, welding, robotic, plastic etc.)
- ❑ Third country consultancy services

teamwork

Questions & Answer

Thank you
Arigatou Gozaimasu
Teşşeküler

teamwork

Project Design Matrix (PDM)

PROJECT TITLE: The Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries

DURATION: Year 2012-2015 (3 years)

IMPLEMENTING AGENCY: Ministry of National Education (MoNE)

COLLABORATION AGENCY: Turkish Cooperation and Coordination Agency (TIKA)

PROJECT SITE: Teacher Training Center (TTC) of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School

TARGET COUNTRIES: 1) Country Focused Training: Azerbaijan, Kazakhstan, Pakistan and 2) Group Training: Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan

TARGET GROUP: Teachers teaching IAT and related subjects in technical and vocational schools in target countries

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Super Goal: IAT human resources are developed in target countries.</p>	<p>IAT department is established in at least in one of the participant's institution.</p>	<p>Follow up survey report</p>	
<p>Overall Goal: Technical education and vocational training capacity on IAT of target countries is enhanced.</p>	<p>Trial IAT program are introduce to the participant's institution.</p>	<p>Follow up survey report</p>	<ul style="list-style-type: none"> • A decision was taken by the local government for the establishment of the IAT department
<p>Project purpose: Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.</p>	<p>A. Kazakhstan: 1. TVE administrators are aware of what and how to introduce IAT program into the TVE. 2. At least 4 TVE college are selected as IAT pilot college 3. At least 3 teachers from each pilot college become capable of teaching basic and intermediate IAT course as team. 4. Basic IAT course program are developed based on the training at TTC.</p> <p>B. Pakistan: 1. TVE administrators are aware of what and how to introduce IAT program in their schools. 2. At least 3 or more institutions are selected for the participation to training in TTC. 3. 10 teachers are trained in Basic, Intermediate and advance IAT course at TTC</p> <p>C. Azerbaijan: 1. TVE administrators are aware of what and how to introduce IAT program in their schools. 2. At least one institution is selected as IAT pilot college. 3. 20 teachers are trained in Basic IAT course at TTC.</p>	<p>A. Kazakhstan: 1. Course implementation reports 2. Need survey report, project progress report 3. Course implementation reports 4. Impact survey report</p> <p>B. Pakistan: 1. Course implementation report, Impact survey report 2. Course implementation report, Project progress report 3. Course implementation report</p> <p>C. Azerbaijan: 1. Course Implementation report, impact survey report 2. Project progress report 3. Course implementation report</p>	<ul style="list-style-type: none"> • Equipment are purchased by the participant institution • IAT Curriculum are approved by the Ministry of Education of target country • Teachers trained in Turkey are assigned to conduct the new curriculum at each target countries.

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	<p>D.Group Training target countries</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of the importance of the IAT. 2. At least 10 teachers from each countries are trained in basic IAT course 	<p>D.Group Training target countries</p> <ol style="list-style-type: none"> 1. Course implementation report 2. Course implementation report 	
<p>Outputs</p> <ol style="list-style-type: none"> 1. Training for target group is appropriately planned. 	<ol style="list-style-type: none"> 1. Appropriate training targets are set for each country focused training country. 2. Appropriate training targets are set for group training. 3. Appropriate training plans are prepared for country-focused training program. 4. Appropriate training plan are prepared for group training program. 	<ol style="list-style-type: none"> 1. Agreement document prepared with each country during the Need Survey 2. Project progress reports 3. Project progress reports 4. Project progress reports. 	<ul style="list-style-type: none"> • As results of the need survey in CFT target countries, local government agreed the target institution and content recommended by the survey team. • A discussion for training content identification was implemented among the GT target countries.
<ol style="list-style-type: none"> 2. Training for target group is effectively provided. 	<ol style="list-style-type: none"> 1. 70% of the course participants are satisfied in term of Course content, course management and Accommodation services in GT courses and CFT courses. 2. At least 80% of participants in country focused training achieve the 70 % of the learning performance. 3. At least 80% of participants in group training achieve the 70% of the learning performance. 	<ol style="list-style-type: none"> 1. Results of the Course Questionnaire 2. Results of the Course achievement tests 3. Results of the Course achievement tests 	
<ol style="list-style-type: none"> 3. Follow-up system is established. 	<ol style="list-style-type: none"> 1. Web-based information system is developed, installed and introduced during the training course 2. Training impact is properly assessed in second and third year in CFT countries, identifying the degree of utilization and it affecting factors, recommendation for the improvement. 3. Training impact is properly assessed in second and third year in GT countries identifying the degree of utilization and it affecting factors, recommendation for the improvement. 	<ol style="list-style-type: none"> 1. Project progress reports 2. Follow up survey report for CFT countries 3. Follow up survey report for GT countries 	

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<p>Activities</p> <p>1-1. Identify detailed training needs of each country.</p> <p>1-2. Select target institution(s) in each country.</p> <p>1-3. Establish specific project targets for each country.</p> <p>1-4. Develop/ improve training curriculum.</p> <p>1-5. Prepare/ improve training material.</p> <p>1-6. Determine training schedule.</p> <p>2-1. Select participants.</p> <p>2-2. Arrange logistics.</p> <p>2-3. Implement training.</p> <p>2-4. Evaluate training.</p> <p>3.1. Develop follow-up plan.</p> <p>3.2. Develop web-based information system.</p> <p>3.3. Conduct follow-up of the CFT and GT participants though web-based information system as well as though the TIKA foreign offices.</p> <p>3.4. Evaluate the impact of the training based on the collected information.</p>	<p>Inputs</p> <p><u>Turkey side:</u></p> <p>1) Personnel</p> <ul style="list-style-type: none"> • Project Director (Director General, General Directorate of Technical and Vocational Education) • Deputy Project Director (Head of Department, General Directorate of Technical and Vocational Education) • Project Manager (Principal, Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School) • Project Coordinator (Teachers Training Center) • IAT Trainers (TTC) • Focal point person of TIKA <p>2) Facilities</p> <ul style="list-style-type: none"> • Office space for experts at TTC • Training facilities at TTC • ICT facilities including PC, Server, LAN and Internet. <p>3) Available data and information related to project</p> <p>4) Recurrent costs</p> <ul style="list-style-type: none"> • Supply of replacement of machinery, equipment, instruments, vehicles, tools, spare parts and other materials owned by Turkey side. • Utility and other basic expenses to run project. <p>5) Following training cost:</p> <ul style="list-style-type: none"> • Interpretation, Translation, Meeting expenses, Training material, Document printing, Excursion etc. <p>6) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Turkish side.</p>	<p><u>Japanese side:</u></p> <p>1) Experts</p> <ul style="list-style-type: none"> • Chief Advisor/ Training Management • Coordinator/ Curriculum Development • Other fields <p>2) Following training cost:</p> <ul style="list-style-type: none"> • Air fare, Transportation, Per-diem, Accommodation, Insurance etc. <p>3) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Japanese side.</p>	<ul style="list-style-type: none"> • Sufficient numbers of TTC counterparts are assigned to conduct the preparation, implementation and evaluation of the courses. • Necessary equipments and facilities are provided for the course implementation at TTC. • Sufficient PC and smooth internet connection is provided at TTC to each participant. • Necessary PC and internet connection is provided at participants institutions. <p>Pre-Condition</p> <ul style="list-style-type: none"> • Target countries participate in project. • MONE's decision to provide international training on IAT to the neighboring countries doesn't change
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**MINUTES OF MEETING
OF
THE SIXTH JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES IN THE REPUBLIC OF TURKEY**

Agreed upon between


Ministry of National Education,

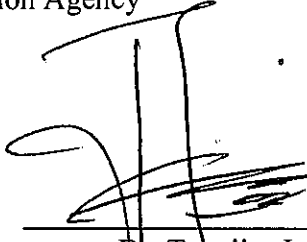
Turkish Cooperation and Coordination Agency

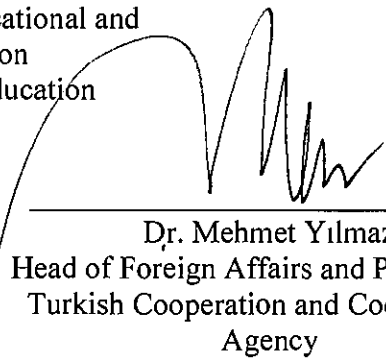
and

Japan International Cooperation Agency

Ankara
3rd July, 2014


Mr. Osman Yildirim Y.
Acting Director General,
General Directorate of Vocational and
Technical Education
Ministry of National Education


Dr. Takujiro Ito
Chief Advisor
JICA Expert Team


Dr. Mehmet Yilmaz
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

The Sixth Joint Coordinating Committee (hereinafter referred to as the “JCC”) Meeting on the Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey (hereinafter referred to as “the Project”) was held on July 3, 2014, at a conference room of the King Hotel Güvenlik, Ankara.

The representatives of Ministry of National Education (hereinafter referred as “MoNE”), Turkish Cooperation and Coordination Agency (hereinafter referred as “TIKA”), Japan International Cooperation Agency (hereinafter referred as “JICA”), as well as Japanese Expert Team, Turkish staffs in Teacher Training Center (hereinafter referred as “TTC”) and observers from related institutions participated the meeting. (For details, refer to Annex 2.)

The results of discussions, which were followed by the participants along the agenda (refer to Annex 1) have been summarized as follows.

1. Explanation of the Agenda

Agenda of the meeting was briefly explained by Ms. Şennur Çetin, Head of Department of MoNE.

2. Presentation and Discussion on the Project Issues

(1) Presentation of the results of the 2nd year Project activities

Mr. Gürcan Bildir, Coordinator of the Project, made his presentation on the results of the 2nd year Project activities (See Annex3). He explained that from November 2013 to July 2014, total of four courses: Country Focused Training (hereinafter referred as “CFT”) Pakistan IAT Basic, CFT Kazakhstan IAT Intermediate, Group Training (hereinafter referred as “GT”) English 2013 B (Palestine), and GT Russian 2014 A (Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan), were conducted. Then, he summarized the four major improvements they made last year. TTC trainers worked on (a) the revision of the textbooks for IAT Basic and IAT Intermediate courses, (b) the revision of the course structure and evaluation methods from Instructional Design (hereinafter referred as ID) point of view, (c) the evaluation results for each participants, which were printed behind their certificates, and (d) IAT Intermediate course, which was implemented for the first time for CFT Kazakhstan. He also explained about two activities they have conducted in TTC. One is the Turkish universities survey on the situation of the IAT pre-service teacher training, and the other is monitoring survey to assess the impact of conducted IAT courses. He mentioned that the results of the former survey would be explained by Mr. Egemen Döğür, his colleague and Head of IAT Department in Mazhar Zorlu Technical and Industrial Vocational High School (hereinafter referred as MZTVH). The two main findings from the latter survey were (a) three out of four target pilot schools in Kazakhstan are in the process of starting IAT course, and (b) one of the trained participants from Pakistan was organized six month IAT course, based on the trainings in Turkey. Mr. Gürcan Bildir concluded that the Project not only implemented the courses successfully but also some impact of the trainings has been actually reported back to TTC.



(3) Effective utilization of TTC

Mr. Yusuf Vural, the acting-Principal of MZTVH, presented on the utilization of the TTC in cooperation with Konak Nevvar Salih İşgören Hotel Management and Tourism Vocational High School (hereinafter referred as "TTVH"). He mentioned that he just took up a post as the acting-Principal, however, he expressed his determination to support the Project as much as possible. He said he was honored to hear that total accumulated number of 108 people have been successfully trained in TTC from 2012.

(4) Presentation on the Work Plan for 3rd year of the Project

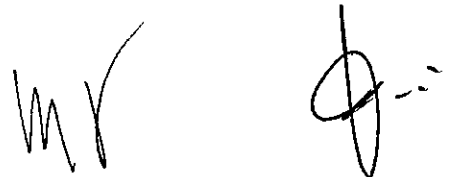
Mr. Egemen Döğler, presented about third year activities of the Project by referring to the third year Work Plan in the handouts (See Annex4 and Annex5). He explained that this third year is the final year of the Project, and four courses: CFT IAT Basic Azerbaijan, GT English 2014 B (target countries: Afghanistan and Palestine), GT Russian 2015 A (target countries: Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) and CFT Pakistan IAT Advanced, are planned to be conducted until April 2015. Then, he proposed the ideas from the TTC Trainers to improve the implementation of the Project. His suggestion was to make slight changes in the course schedule, to swap over the last two courses: GT English 2014 B and CFT Pakistan IAT Advanced. He gave two reasons to change the course schedule; one reason was because the CFT Pakistan IAT Advanced course will be the first Advanced course to be implemented, thus, more reflection period would be needed for improvement of the course. Second reason was because in the original plan, there were overlapping of the courses GT English 2014 B and CFT IAT Basic Azerbaijan. By swapping the courses, there would not be any overlapping in the schedule and courses will be implemented smoothly. He asked everyone on the floor if there is any question regarding the activities or changing of the course schedule. He added that he will explain in detail about the future plan proposal of the TTC to collaborate with universities which provide IAT pre-service training, in the second session.

Ms. Şennur Çetin asked TİKA if they have any problem regarding presentation of the Mr. Egemen Döğler, and Dr. Mehmet Yılmaz kindly replied that they do not have problem for implementation of the courses. Mr. Osman Yıldırım, Acting Director General of Ministry of National Education also agreed for the changes. Mr. Masahiro Ueki, Senior Representative of JICA, added that those changes seem suitable, however, he emphasized that submission of the financial reports of all courses must be by the end of March 2015, which is the end of JICA's fiscal year. Dr. Takujiro Ito, Project Chief Advisor of JICA IATE Project Expert Team, added that the last assignment of the Project Expert Team will be from middle of February to March, and the team will support TTC trainers to submit those reports by the deadline.

Ms. Şennur Çetin summarized that the entire members agreed on the course schedule and the course activities that Mr. Egemen Döğler proposed.

(5) Explanation about the dispatch of the TTC experts to Kazakhstan

Ms. Şennur Çetin invited Dr. Takujiro Ito, Project Chief Advisor, to make his presentation about on-site follow-up in Kazakhstan, to dispatch the team of TTC trainers as experts to the target country (See Annex6). First, he reported the results of the follow-up he conducted in



May 2014 to the four pilot colleges in Kazakhstan, which participated in the CFT IAT Basic course in June 2013. He explained about his visits to two pilot colleges in Almaty, one in Taldykorgan, and the other in Taraz. He was happy to share the information that Ministry of Education (hereinafter referred as MoE) in Kazakhstan was interested in introducing IAT courses to pilot colleges, and all pilot colleges were working hard to accelerate the process. However, he pointed out that those colleges were facing with some challenges. One of the two major challenges was regarding the procedures for authorization to introduce new IAT courses and procurement of the equipment to the pilot colleges, and the other was technical issues such as setting laboratories and development of teaching materials. He said that he received several requests from those colleges to send TTC Trainers as IAT experts to support the technical issues for introducing IAT courses into their colleges.

Secondly, he explained the overview of the plan: The purpose of dispatching TTC trainers to Kazakhstan was to support the incorporation of the new IAT courses into the four pilot colleges. Two specific objectives were (a) to analyse the current situation of the four pilot colleges regarding facilities, equipment and courses, and provide necessary advice for the introduction of the new IAT course; and (b) to conduct a joint workshop to develop teaching materials for the new IAT courses. The proposed period of dispatch was two weeks in September 2014. The proposed expert team consists of five TTC trainers, composed by one coordinator and two teams of pairs.

He emphasized that the coordinator plays a key role, since bureaucratic procedures are crucial in Kazakhstan, he will visit Astana to negotiate with MoE in order to accelerate the ministry's process. In addition to negotiation with MoE, he will visit Nazarbayev University, which recently introduced complete sets of Japanese IAT training system similar to TTC, to search about their IAT training programs. Meanwhile, two teams of TTC trainers will visit pilot colleges one in Taldykorgan and another in Taraz separately to conduct follow-up activities. Then, in the second week, all five TTC trainers will gather in Almaty. In the beginning of the second week, the coordinator will mainly prepare for the workshop, while two teams visit two pilot schools in Almaty. Then, in the latter half of week, TTC trainers and 12 ex-Kazakhstan participants will gather in one of the pilot schools in Almaty, Almaty State College of Energetic and Electronic Technologies, to conduct teaching material development workshop.

Thirdly, he presented tentative schedule for the official procedure for requesting the dispatch of TTC trainers to Kazakhstan. He mentioned that the request letters from Almaty State College of Energetic and Electronic Technologies, which will host the workshop, is in the process of applying to the ministry. The submitted request will be forwarded to TIK A Astana from MoE in Kazakhstan. Then, the request will be sent to TIK A Turkey, and forwarded to relevant ministry, which is MoNE.

Dr. Mehmet Yılmaz raised a question, if there is financial support from JICA regarding the dispatch of TTC trainers to Kazakhstan. Dr. Takujiro Ito replied that in the previous discussions in the JCC, the Project proposed the idea to include this program as a part of the TIK A's program for Kazakhstan. He added that TIK A Astana have a program to send Turkish experts to Kazakhstan, and agreed to include this proposal if the request was approved. Dr. Mehmet Yılmaz commented that when TIK A receives request from Kazakhstan, it will be decided by the department, which is in charge of the region. Thus, he



needs to consult with the related department; however, he repeated that if there is possibility of cost sharing with JICA, so that the process will be much easier. Dr. Takujiro Ito explained that it is the same methodology with the needs survey conducted in the beginning of the Project, which Turkish side provided expenses for Turkish experts and JICA provided expenses for Japanese experts. Dr. Mehmet Yılmaz agreed to consult with the related department in TİKA regarding this matter.

Dr. Takujiro Ito continued with the presentation and emphasized that the procedure of authorization needs to be done without delay, in order to dispatch the experts in the beginning of September.

Fourthly, Dr. Takujiro Ito added explanation about necessary expenses for the program. The main cost will be the daily allowance, accommodation, and transportation for the TTC trainers, and cost of translators. He suggested the idea if TİKA Astana could provide translators as they did for the needs survey. Dr. Mehmet Yılmaz replied that it is impossible to allocate TİKA staff, thus, MoE Kazakhstan should provide the cost. Dr. Takujiro Ito said that the Project will take note of his comment.

Dr. Takujiro Ito questioned if MoNE attache in Turkish Embassy in Kazakhstan could support the TTC trainers and provide translators. Mr. Osman Yıldırım replied that it would not be possible. Ms. Şennur Çetin added when MoNE is sending experts to other countries with TİKA, receiving countries provide local facilities such as translators. She proclaimed that the government of Kazakhstan should provide necessary expenses, as they are requesting Turkey to send experts. Mr. Masahiro Ueki commented that this matter should be consulted with Kazakhstan counterparts in the first place.

Dr. Takujiro Ito summarized his presentation by reminding the significance of the on-site follow-up by TTC trainers. He said that by combining the TCTP trainings in Turkey and dispatch of the TTC trainers to Kazakhstan, the Project could actually evaluate the impact of the training, to check in what extent the technical transfer has been made. He stressed that not many training programs actually focus on the impact of the training, whether the learned knowledge and skills in the training have been utilized or not. If the Project could support this four pilot schools in Kazakhstan to introduce IAT courses that would be big achievement towards Overall Goal.

Ms. Şennur Çetin asked if there is any overlapping of the schedule, especially TCTP training courses and the dispatch of the TTC trainers to Kazakhstan. Mr. Egemen Doğer replied that there is no overlapping at this moment.

(6) Evaluation of the Project and its issues

Ms. Miyuki Konnai, Project Formulation Advisor from JICA, explained about the evaluation mission which will be conducted in September. The details of her presentation is as follows: This evaluation is performed to all the JICA technical cooperation projects, upon six months before the termination of the project. The purpose of the evaluation is to evaluate the achievement of the project purpose in the PDM, focusing on its efficiency and the sustainability point of view. Based on the results of the evaluation, JCC will be held to clarify



the following three points: (a) Remaining necessary activities to be done by the Project in cooperation with JICA, TIKA and MoNE, (b) Determine whether it is appropriate to complete the Project as originally planned or any possibility of the extension, and (c) Determine any additional necessary follow-up activities should be made or not. The evaluation mission will be consisting of three personnel from Japanese side: Senior Representative or Chief, JICA staff and a Japanese consultant. However, JICA is happy to conduct joint evaluation with the Turkish side, so the staffs from TIKA and MONE are welcome, too. The tentative schedule for the mission is from September 16th to the end of September.

Dr. Mehmet Yılmaz questioned if the evaluation mission is going to the target countries of the TCTP, and Ms. Miyuki Konnai replied that the evaluation will be done only within Turkey.

Ms. Şennur Çetin thanked Ms. Miyuki Konnai for the explanation and she announced ten minutes break as it was scheduled.

3. Discussion on the continuity and sustainability of the TTC after the finalization of the project

(1) Results of the University survey and proposing plan

Ms. Şennur Çetin opened the second session and invited Mr. Egemen Döğler for his presentation. He began the presentation by explaining the overview and results of the university survey (See Annex7). The details of his presentation were as follows: The main two purposes of the survey were (a) to visit neighboring universities, which opened Mechatronics courses and provide IAT pre-service trainings, to identify the situation of the facilities, curriculum, materials and trainers; and (b) to discuss the possibilities of the future cooperation with TTC for the acceptance of the training in Izmir. The survey was conducted by six members of the Project from February 17 to 22 in 2014. During this six days, the team visited five universities: Pamukkale University in Denizli, Süleyman Demirel University in Isparta, Kocatepe University in Afyon, Kütahya Dumlupınar University in Simav, and Bursa Technical University. In addition, the team visited Bursa Ali Osman Sönmez Technical and Industrial Vocational High School, which is one of the best vocational high school on IAT.

The result of the survey was critical situation regarding IAT pre-service trainings, from the point of facilities including equipment, materials, and knowledge and experience of the academic staff. Five out of two, Kocatepe University and Bursa Technical University are conducting the course, while Pamukkale University, Süleyman Demirel University and Kütahya Dumlupınar University could not start the course due to lack of teachers, laboratory and materials. From the discussions with the faculty of the universities, following requests were made: (a) to train academic staff from the universities at TTC, (b) to conduct mechatronics practice of the university students at TTC, and (c) to send short-term lecturers from TTC.

He proposed some idea how those activities could be implemented such as protocol between TTC and universities or the protocol between Izmir MoNE and universities. In addition, he

In addition, he proposed another idea as the extension of IATE project to cover these activities. He suggested the objective of the extension would be (a) support the achievement of overall goal of the IATE project, which mainly focus on TCTP trainings, and (b) support the improvement of the Turkish IAT teacher trainings, which mainly focus on cooperation with the universities. By extending the Project, 14 years of efforts from many experts and the budget from JICA, MoNE and TIKA would be utilized and we could continuously make use of TTC. Especially, he mentioned if the second objective could be established as program, to train university academic staff and fourth grade students in TTC, TTC will be able to provide sustainable trainings.

Ms. Şennur Çetin thanked the presenter and commented that this topic was discussed also in the meeting of previous day, and after the presentation of TIKA, we will hear the decision of the General Director.

(2) TIKA view for the possibility of the future extension of TVE

Dr. Mehmet Yılmaz congratulated the Project for the progress and the achievement they have made. He said that he was impressed to receive the Progress Report of the Project, and pointed out that analyzing the results and conducting evaluation is very important. Regarding the future extension of the Project, TIKA would like to conduct internal evaluation with the help of MoNE. The decision of MoNE will be the key for deciding the extension. One idea is to narrow down the target countries, because now the Project have nine target countries with different situations. In the beginning of the project, we have conducted needs survey to analyze the situations of the target countries; however, the levels of the countries were much different in practice. Other than that, the Project is the fruitful collaboration with JICA.

(3) Result of the visit to Japan and ideas for the future of TTC

Mr. Osman Yıldırım thanked the audience and shared his idea for the future of TTC. He emphasized that the TTC will be used actively, especially the laboratories and knowledge of the TTC trainers for the in-service trainings from 2015. His plan is to conduct trainings every months, thus, TTC will remain active. Regarding the cooperation with the universities, as Mr. Egemen Döğler proposed, there are two ways, either to sign protocol directly with universities or to sign protocol between İzmir MoNE and universities. Latter seems easier for TTC from the management side of view. For the budget for the trainings, universities have their own budget and also it is possible to apply for TUBITAK or other donner agencies.

He clearly stated that according to the legislation of MoNE, it is impossible to have independent TTC. However, TTC needs technical staffs, the principal and deputy-principal as it was discussed in the previous JCC. And the assignement of the teachers and the budget in TTC have to be sorted out. He added the explanation that MoNE could assign the teachers to TTC before 2011, however after the amendment of the legislation, it became not possible. Until now, the temporary assignment of the teachers by İzmir Governorship seems working well, thus the assignment could be continue in that way. Either the extension of the IATE Project or termination of the Project, he stated the TTC will be kept and be utilized for the in-service training for the teachers.

Then, he shared his idea regarding the visit to Japan in fall 2013. The team visited Polytechnic Centers, which conduct skill trainings for job seekers and refresher trainings for the engineers. They also have human resource centers inside, for research and development, which was very interesting for us. They also accept international students to be trained.

The Polytechnic University, which is the university to train teachers in Polytechnic Centers and conduct research and development, were interesting, too. From 2015, instead of training teachers in the university, experienced engineers will be employed at the vocational training centers.

The Kosen was another interesting topic. In Japan, at age of the 15, vocational education are conducted for 5 years in Kosen. The advantages of the Kosen were: strong relationships with industries, 100% employment rate of graduates, more than 50 accreditations, interesting school activities such as Robot contest, accommodation facilities for students, and higher education degrees such as Master degree and Doctorate degree. They provided high quality and intensive courses, which consist of experimental and project based trainings.

Lastly, he mentioned about the visit to the factory of Denso Corporation, which was a leading supplier of advanced automotive technology, systems and components for the automakers. They established training centers in the factory to train their own employees. It was striking that the industry sides have the similar educational institution as Kosen.

He summarized that he was impressed by the fact that experimental, project based, problem-solving based vocational education were given in each institutions, and the facilities were well equipped. He expressed his appreciation to JICA and the experts for organizing the fruitful visit.

Dr. Mehmet Yılmaz commented that as he heard from Dr. Takujiro Ito that the visit actually was the technical training on IAT, however, it would be nice if someone from TIKA would have participated. Mr. Masahiro Ueki replied if TIKA is interested in the training in Japan, JICA could organize a visit to JICA Headquarter and international training centers to see how the projects are planned and conducted in Japan. Dr. Mehmet Yılmaz answered he would be interested and both sides agreed to discuss about it later.

(4) JICA prospective and recommendation for the sustainability of the project impact

Ms. Şennur Çetin introduced last speaker, Mr. Masahiro UEKI. He showed his appreciation to the audience and he was happy to hear the good results presented so far. He mentioned that this will be the final year for the Project and the final evaluation will be conducted as it was explained by Ms. Miyuki Konnai. He added that the main point of the final evaluation is to find out whether we have achieved the project purpose or not, and to determine whether any additional inputs are needed or not. Those discussions will be made in JCC in September.

Regarding the proposals for the sustainability of the TTC, he said that JICA appreciates the active discussions regarding the project; however, to maximize the effect of the project, we



may need to focus to one project. As for JICA, the prioritized fields, or the field of focus for the technical cooperation, are human resources development in the industry, and international partnership project with TIKA. For example, TTC or SPREAD projects belong to the first field, and IATE project belong to the latter. When MoNE is proposing JICA for the extension of the project or a completely new project, those proposals must be in the focused field. He recommended MoNE to choose one proposal they would like to focus rather than submitting the several proposals. He added that JICA could have meeting with MoNE to choose which proposal is suitable for Turkey. He also proposed to have meeting with TIKA, regarding the proposal of the project and the final evaluation.

He explained about the procedure of the new project proposal. The proposal must be submitted from related ministry such as MoNE to the Ministry of Development, which would be forwarded to Ministry of Foreign Affairs, then the document will be submitted to Japanese Embassy. He reminded that, by the end of August, official request has to be submitted to the Japanese Embassy. If MoNE is requesting for the extension of IATE project, it will be determined after the final evaluation in September. He noted that it is good timing to start discussions about the extension of IATE and proposals for new project. However, he stressed that the decisions have to be made quickly in order to match the schedule.

Ms. Şennur Çetin thanked Mr. Masahiro Ueki and summarized the second session: she reminded TTC trainers to consult with Izmir Governorship for the protocol with the universities, and she suggested that MoNE could check the draft protocol if needed. Regarding the on-site follow-up to Kazakhstan, the process has to be accelerated since the permission for the TTC trainers might have some challenges. She kindly asked Dr. Takujiro Ito to consult with Kazakhstan MoE for the arrangement of translators. Regarding the proposal of the project, she stated MoNE will finalize the proposal with the help of JICA and TIKA.

4. Closing Remarks

The meeting was closed by the Closing Remarks by Mr. Osman Yıldırım.





Industrial Automation Technology Extension Project for Central Asian and Middle East Countries

MoNE-TIKA-JICA Cooperation Project
Mazhar Zorlu Technical and Industry Vocational High School Teacher Training Center
Mevlana Mah. 1776 Sok. No: 2/2 Bornova - IZMIR TURKEY
Tel & Fax: +90 232 342 7043



Ministry of National Education
Republic of Turkey

The Sixth Joint Coordinating Committee Meeting

Date : July 3rd, 2014 (Thursday)
Time : 10:00 – 12:00
Venue : Meeting Room of King Hotel Güvenlik, Ankara
Chair : Mr. Osman YILDIRIM, Acting Director General, General Directorate of VTE, MoNE
Moderator : Ms. Şennur ÇETİN

Agenda:

1. Explanation of the Agenda by Ms. Şennur ÇETİN (2 min.)
2. Presentation and discussion on the project issues
 - (1) Summary of the progress of the Project, by Ms. Şennur ÇETİN (5 min.)
 - (2) Presentation of the results of the 2nd year Project activities by Gürcan BILDIR (10 min.)
 - Break (10 min.)
 - (3) Effective utilization of TTC by Acting Principal of MZVTE high school Mr. Yusuf VURAL (10 min.)
 - (4) Presentation of the Work Plan for 3rd year of the Project by Mr. Egemen DOĞER (10 min.)
 - (5) Explanation of the details of dispatch of the TTC experts to Kazakhstan, by Dr. Takujiro ITO (5 min.)
 - (6) Evaluation of the Project and its issues, by Ms. Miyuki KONNAI (10 min.)
 - Break (10 min.)
3. Discussion on the continuity and sustainability of the TTC after the finalization of the project
 - (1) Results of the University survey and proposing plan, by Mr. Egemen DOĞER (10 min.)
 - (2) TIKa view for the possibility of the future extension of the TVE, by Dr. Mehmet YILMAZ (10 min.)
 - (3) Results of the visit to Japan and ideas for the future of TTC, by Mr. Osman YILDIRIM (10 min.)
 - (4) JICA prospective and recommendation for the sustainability of the project impact, by Mr. Masahiro UEKI (10 min.)
4. Other Topics if Necessary, upon the proposition of JCC members (5 min.)
5. Closing remarks by Mr. Osman YILDIRIM

Attendance List for 6th JCC Meeting

Annex 2


JCC Members, Turkish side

June 3, 2014

No.	Name	Position	Affiliation
1	Mr. Osman YILDIRIM	Acting Director General	GD of Vocational and Technical Education, MoNE
2	Ms. Şennur ÇETİN	Head of Department	GD of Vocational and Technical Education, MoNE
3	Dr. Mehmet YILMAZ	Head of Foreign Affairs and Partnerships Department	Turkish Cooperation and Coordination Agency
4	Ms. Ayşe ÖRÜN	Expert	Turkish Cooperation and Coordination Agency
5	Ms. Berna GÜRKAŞ	Expert	Turkish Cooperation and Coordination Agency
6	Mr. Yusuf VURAL	Acting Principal	Mazhar Zorlu Technical and Industrial Vocational High School
7	Mr. Egemen DÖĞER	Head of IAT department	Mazhar Zorlu Teacher Training Center
8	Mr. Gürcan BILDIR	Coordinator of Project	Mazhar Zorlu Teacher Training Center
9	Ms. Kübra Karaibis	Assistant Expert of MONE	GD of Vocational and Technical Education, MoNE

JCC Members, Japanese Side

No.	Name	Position	Affiliation
1	Mr. Masahiro UEKI	Seniro Representative	JICA Turkey Office
2	Ms. Miyuki KONNAI	Project Formulation Advisor	JICA Turkey Office
3	Dr. Takujiro ITO	Project Chief Advisor	JICA IATE Project Expert Team
4	Ms. Mami FUJISHIMA	Project Coordinator	JICA IATE Project Expert Team



RESULT OF THE 2ND YEAR PROJECT ACTIVITIES

IAT COURSES

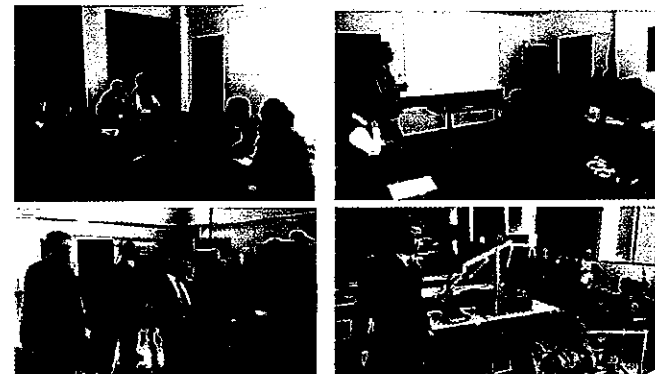
- Country Focused Training (Pakistan – CFT 2013/11/4-22)
- Group Training (Palestine - GT 2014/1/6-31)
- Group Training (Taj.-Kirg.-Turkm. - GT 2014/4/14-5/10)
- Country Focused Training (Kazakhstan – CFT 2014/6/2-20)

IMPROVEMENTS OF THE COURSES

- Textbooks are revised for IAT Basic and intermediate
- Course structure and evaluation methods are revised according to Instructional Design
- Evaluation results are printed behind the certificates.
- Intermediate program is implemented for the first time and checked for the Kazakhstan Course

ACTIVITIES OF THE PROJECT

- Survey for Mecathronics Department of Technology Faculties.



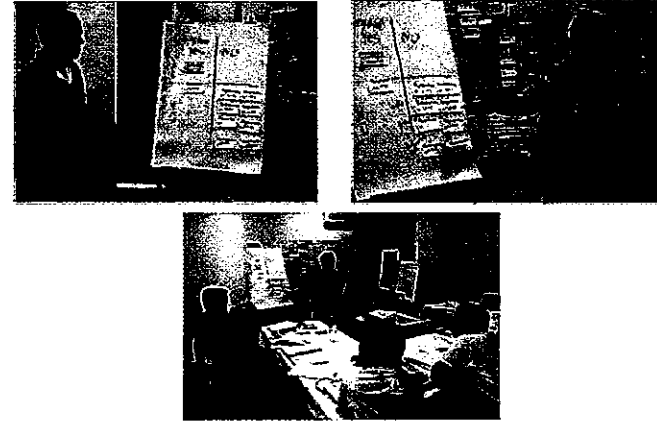
ACTIVITIES OF THE PROJECT

- The event Innovational Approach on IAT Training was conducted with the participation of university and technical schools representatives.



ACTIVITIES OF THE PROJECT

- Workshop on Revising IAT Curriculum and Evaluation



IMPACT OF THE PROJECT

- 3 of 4 pilot schools from Kazakhstan are preparing start the IAT course. Other school is waiting permission for authorization.
- Participants from Pakistan conducted 6 month IAT course and completed.



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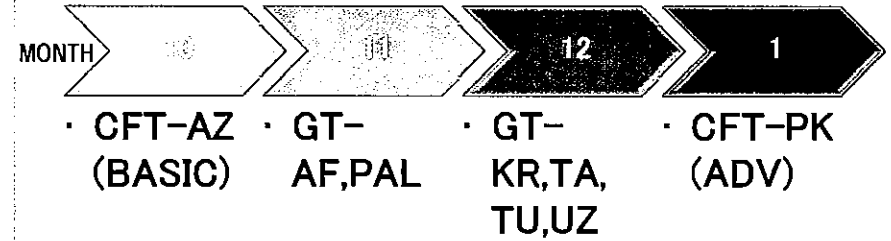
Annex 4

The Work Plan for 3rd year of the Project

Egemen DÖĞER

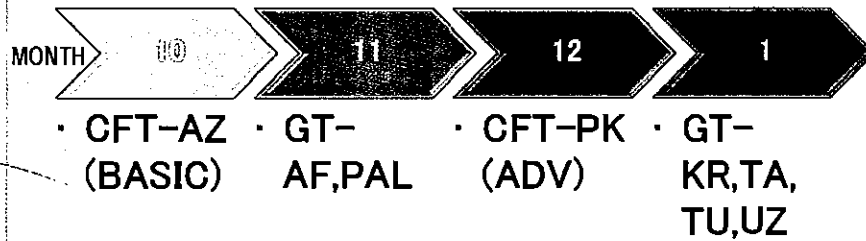
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Current Course Schedule



teamwork

Proposing Course Schedule



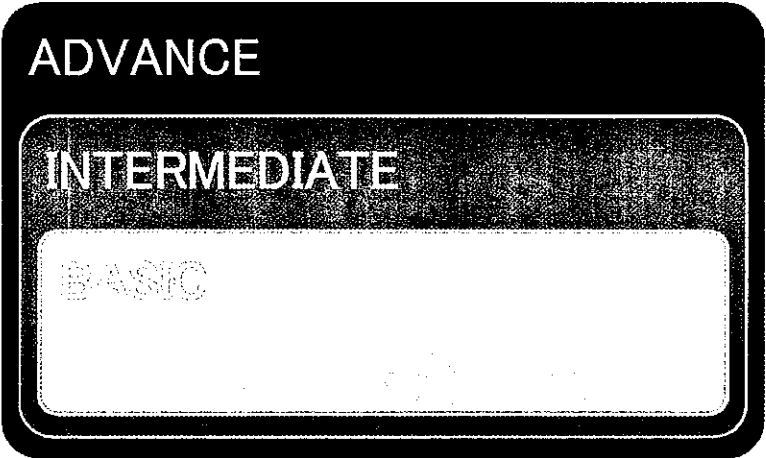
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Proposing Course Schedule

No	Activities	Number of Participant	Language	OCTOBER 2014				NOVEMBER 2014				DECEMBER 2014				JANUARY 2015			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Group Training Afghanistan Palestine	2014 - 10	E						4W										
								10				5							
2	Group Training Tajikistan Kirghizistan Turkmenistan Uzbekistan	2014 - 13 2015 - 13	R															4W	
																		5	3C
3	Country Focused Training PAKISTAN	2014 - 10	E										3W						
													8				26		
4	Country Focused Training AZERBAIJAN	2014 - 10	T					4W											
								13				7							

teamwork

Develop and improve training curriculum.



teamwork



Ministry of National Education
(MoNE)



Turkish Cooperation and
Coordination Agency
(TIKA)



Japan International
Cooperation Agency
(JICA)

Technical Cooperation Project

**The Industrial Automation Technology (IAT)
Extension for Central Asian and Middle East
Countries in the Republic of Turkey**

Work Plan for the Third Year of the Project

**June 2014
Ankara - Turkey**

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1. General Information about the Project

1.1 Background of This Project

Government of Turkey (hereinafter referred as "GoT") has been focused on implementing policy measures to strengthen its global competitiveness of manufacturing industries, and to introduce advanced technology and promote capital intensive industries to enable the delivery of high valued products and services since the 1990s. GoT has prioritized the improvement and strengthening of supply and labor market with capable technicians and skilled human resources.

In this context, the project "Establishment of Industrial Automation Technologies by the General Directorate of Vocational and Technical High Schools" was successfully carried out jointly by the General Directorate of Vocational and Technical Education (hereinafter referred as "GDVTE") of Ministry of National Education (hereinafter referred as "MoNE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") from 2001 and 2006 with the aims of establishing industrial automation technology (IAT) departments at international standards in Izmir Mazhar Zorlu and Konya Adil Karaagac Anatolian Technical High Schools, training the teachers of this department in Japan and developing training and education programs for IAT.

Following the successful implementation of the above-mentioned project, which produced outputs in line with the sectorial demands, it was planned in 2005 to newly establish IAT departments in 20 schools. The Teacher Training Centre (hereinafter referred to as "TTC") was established at Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School in 2006 with the aim of developing the teaching staff who will work at the IAT departments of the 20 schools.

In 2007, GDVTE of MoNE and JICA commenced "The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department" (SPREAD). This project established the Teacher Training System within TTC, and teachers and staff at TTC were trained.

Following those successful initiatives, GoT and Japan decided to transfer the knowledge and experiences acquired through the above-mentioned projects to vocational and technical teachers of the countries in Central Asia and Middle East Region by means of training to be provided at TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School. In 28 November 2011, a Record of Discussion was signed between MoNE, JICA and Turkish Cooperation and Coordination Agency (hereinafter referred to as "TIKA") setting the framework for the project implementation.

This Work plan presents the outline for the implementation of the third year activities of the project.

1.2 Framework of the Project

The basic project framework, based on the R/D exchanged in November 2011, is shown below.

(1) Super Goal/ Overall Goal

Super Goal: IAT human resources are developed in target countries.

Overall Goal: Technical education and vocational training capacity on IAT of target group is enhanced.

(2) Project Purpose

Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.

(3) Project Outputs

Output 1: Training for target group is appropriately planned.

Output 2: Training for target group is effectively provided.

Output 3: Follow-up system is established.

(4) Project Site

The project site will be TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School.

(5) Target Countries

Azerbaijan, Kazakhstan, Pakistan, Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan (Total of 9 countries)

(6) Relevant Government Agencies and Organizations

GDVTE of the MoNE will be the counterpart to JICA. However, in the practical manner, JICA experts will work together with counterparts in TTC of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School. TIKA, a collaborating agency, will provide the necessary support.

(7) Beneficiaries

Direct beneficiaries: Teachers teaching IAT and related subjects in technical and vocational schools in target countries.

Indirect beneficiaries: Students in technical and vocational schools in target countries.

2. Implementation Structure

2.1 Key players and Implementation Structure

The Project Implementation Structure is shown below. TTC will be the main player of the implementation of the project, coordinating with MoNE, which is the superior division. MoNE will collaborating with TIKA. Activities such as needs survey, recruitment of participants, follow-up of the trained participants would be carried out with the help of TIKA Coordination Offices in the target countries.

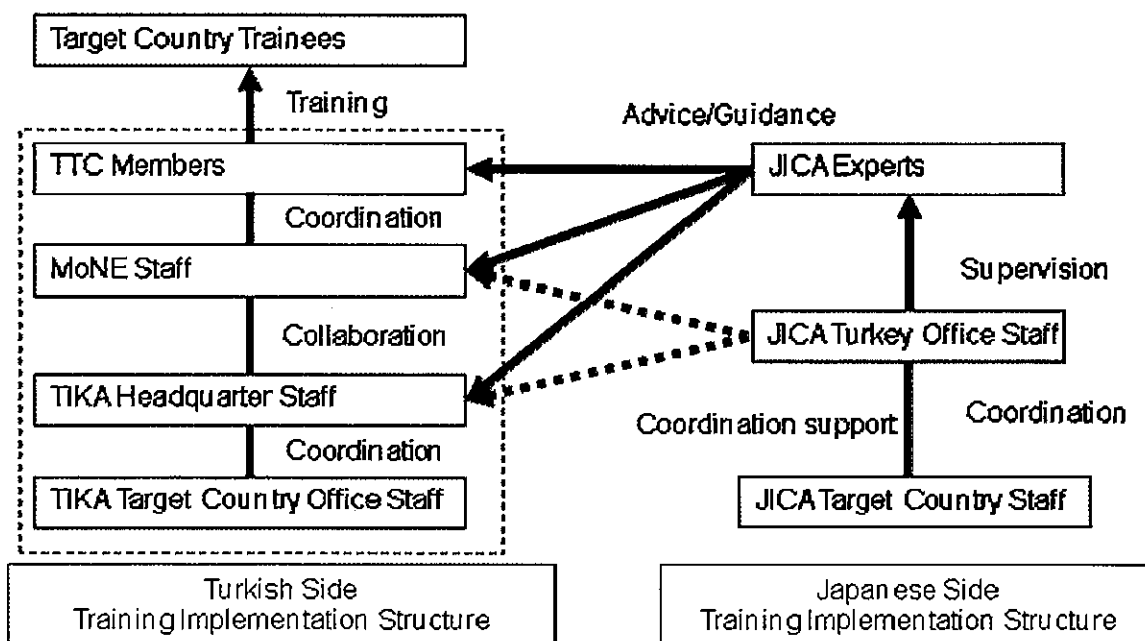


Figure 1. Implementation Structure

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JICA experts, under the supervision of the JICA Turkey Office, would provide advice or guidance for the implementation of the international training to TTC members, MoNE staff and also to TIKA Headquarter staff. JICA Turkey Office would coordinate and support both MoNE and TIKA. If necessary, JICA Turkey Office will coordinate with JICA offices in target countries.

Detailed roles and responsibilities of each organization agreed on R/D are shown below.

Table 1 Detailed Roles and Responsibilities

Organization	Roles and Responsibilities	Inputs
Izmir Mazhar Zorlu School Teacher Training Center	<ul style="list-style-type: none"> -Develop implementation plan of the Trainings within the project framework. -Lead the implementation of the Trainings <ul style="list-style-type: none"> ❖ Analyses of target, curriculums, training contents, materials, etc. ❖ Development of course contents and materials. ❖ Organization of logistical arrangements. ❖ Provision of lectures and site visits. ❖ Compilation of implementation reports. ❖ Implementation of monitoring of the ex-participants' activities. ❖ Provision of follow-up support to the ex-participants. ❖ Conduct initial selection of training candidates. 	<ul style="list-style-type: none"> - Principal of Izmir Mazhar Zorlu Anatolian Technical and industrial Vocational High School to be the "Project Manager" who will bear administrative and technical responsibility for the implementation of the Project. - Services of counterpart personnel and administrative personnel. - Lecturers / instructors for the training. - Suitable office space for JICA Experts with necessary equipment. - Supply and/or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary owned by Turkey side. - Utility and other basic expenses to run the Project. - Available data and information related to the Project. - Information as well as support in obtaining medical service for the JICA Experts.
Ministry of National Education	<ul style="list-style-type: none"> - Take overall responsibility of the management and implementation of the Project. - Overall coordination among all stakeholders. - Coordinate with relevant Turkish Embassies in the target countries whenever the necessity arises. - Supervise the selection process of candidates for training and confirm the selection. 	<ul style="list-style-type: none"> - Director General of General Directorate of Vocational and Technical Education to be the "Project Director" who will bear overall responsibility of the Project. - Head of Department of General Directorate of Vocational and Technical Education to be the "Deputy Project Director" who will bear responsibility of the management of the Project. - Services of counterpart personnel. - Allocation of running experiences within MoNE, necessary for the Project. - Budget for Training Implementation Expenses. (Meeting Expenses, Document Printing, Other Expenses etc.)
TIKA Headquarters	<ul style="list-style-type: none"> -Coordination with MoNE, TTC, JICA and TIKA Program Coordination Offices.(PCOs) -Support the implementation of the Trainings. <ul style="list-style-type: none"> ❖ Developing GI. ❖ Compiling and providing country information to TTC. ❖ Provision of feedbacks to TTC according to gathered information from TIKA PCOs regarding general information of Target countries. ❖ Coordinate and support logistical arrangement for selection procedures of candidates. ❖ Participate in selection of candidate. ❖ Supporting of agreed portion of logistical arrangements. 	<ul style="list-style-type: none"> - Expenses of Turkish members to participate in joint needs survey mission to country focused training target countries. - Budget for Training Invitation Expenses (Air Fare, Transportation, Pre-diem, Accommodation, Health Insurance, Expendable Supplies and Consumption Materials.)
TIKA PCOs in Target Countries	<ul style="list-style-type: none"> - Coordinate with the target countries for the implementation of the Trainings. <ul style="list-style-type: none"> ❖ Coordination with the target organizations for proper selection of nominees. ❖ Distribution of GI and gathering of application forms. ❖ Notifying the selection results to the respective governments. ❖ Provide support to the participants for departure and giving orientation. 	

The Industrial Automation Technology Extension Project for Central Asian and Middle East Countries
Work Plan for the Third Year of the Project (Draft)

	<ul style="list-style-type: none"> ❖ Gather general information of country situation, feedbacks from participants, and potential training needs of the Target countries. ❖ Become focal point for the follow-up activities toward the ex-participants. 	
JICA Experts	<ul style="list-style-type: none"> - Provide overall support to the project through the facilitation and technical advice to MoNE, TTC and TIKA. - Support the implantation of the Trainings by giving technical lectures in the agreed field. - Participate in selection of candidates for trainings. 	
JICA Turkey Office	<ul style="list-style-type: none"> - Coordinate with MoNE, TTC, TIKA, JICA Experts and JICA Offices 	<ul style="list-style-type: none"> - Dispatch of the Experts (Chief Advisor/ Training Management/ Curriculum Development 1, Curriculum Development 2, Coordinator/ Assistant Training Management). - Expenses of JICA Experts to participate in joint needs survey mission to country focused training target countries. - Budget for Training Implementation Expenses. (Perdiem, Accomodation, Translation Expenses, .) - Equipment donation - Training in Japan, site visits in the invited counties.
JICA Offices in Target Countries	<ul style="list-style-type: none"> - Support coordination with target countries whenever necessary. 	

2.2 Implementation Team

(1) Turkish C/P team

The Turkish C/P team is organized by MoNE and TIKA as follows.

Table 2 Members of the Turkish C/P team

Organization	Name	Title in Organization	Title in Project
MoNE	Mr. Osman YILDIRIM	Acting Director General	Project Director
MoNE	Ms. Şennur ÇETİN	Head of Group	Deputy Project Director
MoNE	Mr. Mehmet YAZAR	Expert	
MoNE	Mr. Yusuf VURAL	M.Z. School Acting Principal	Project Manager
MoNE	Mr. Egemen DÖĞER	Chief of IAT Department	Counterpart
MoNE	Mr. Gürcan BILDIR	Coordinator	Counterpart
MoNE	Mr. Bülent VARDAL	Teacher of M.Z. School	Counterpart
MoNE	Mr. Ismail AKTAŞ	Teacher of M.Z. School	Counterpart
MoNE	Mr. Murat ÖZDEVECİ	Teacher of M.Z. School	Counterpart
TIKA	Mr. Mehmet YILMAZ	Head of Department	
TIKA	Ms. Ayşe ÖRÜN	Expert	
TIKA	Ms. Berna GÜRKAŞ	Expert	

(2) Japanese Experts and its duties

JICA will assign 4 experts to provide technical support for the implementation of the project. The primary duties of the experts in charge of this project are shown below.

Table 3 Duties of each expert

Name	Position	Duties
Dr. Takujiro Ito	Chief Advisor/ Training Management/ Curriculum Development 1	<ul style="list-style-type: none"> • Support the planning, implementation, and management of the project as a whole • Information sharing, communication, coordination with Turkish side • Supporting development of the training plan and curriculum • Supporting implementation of the training and seminars • Preparation of the reports for JICA
Mr. Hideki Kumagai	IAT Equipment/ Training Management	<ul style="list-style-type: none"> • Supporting the improvement of the IAT training curriculum and materials • Supporting the training of CP on IAT
Ms. Ayako Nakazato	Curriculum Development 2	<ul style="list-style-type: none"> • Supporting the development of the training materials • Supporting the development of the follow-up system
Ms. Mami Fujishima	Coordinator/ Training Management Assistance	<ul style="list-style-type: none"> • Assisting project management • Financial administration • Coordination between JICA and other related organizations • Supporting implementation of the training and seminar

3. Activities for the third year of the Project

Activities for third year, May 2014 to April 2015, of the project will be implemented as described below.

3.1 Develop and get the approval of the third-year Work Plan.

Based on the implementation plan, develop the third year Work Plan. In the Work Plan, fundamental policies of the operations, task objectives and detail procedures will be summarized. Through consulting with the relevant Turkish organizations about the content of the plan, it will be agreed between the JCC members.

3.2 Dispatch Short-Term Expert, IAT Equipment/ Training Management, to support CP staffs to improve training contents.

Dispatch Short-Term Expert, specialized in IAT Equipment/ Training Management, in order to support Country-Focused Training for Kazakhstan, TVE Trainers IAT Intermediate Course. (By Whom)

3.3 Develop and improve training curriculum.

Based on the result of training evaluation for the previous year and with the help of Short-Term Expert mentioned in Activity 3.2, update and improve the training material. If additional materials are necessary, the project team will prepare accordingly.

3.4 Prepare and improve training material.

Based on the result of training evaluation for the previous year, update and improve the training material. If additional materials were essential, create and translate the material.

3.6 Revise the training schedule and training period.

Based on the result of training evaluation for the previous year, revise the training schedule and the training period.

3.7 Finalize the Objectively Verifiable Indicators and confirm PDM.

Revise the PDM if necessary, and set the objectively verifiable indicators for the project purpose and outputs with JCC members.

3.8 Hold sixth Joint Coordination Committee (JCC) Meeting.

With the help of the project manager of the CP staffs, fourth JCC meeting will be held. At the meeting, third year Work Plan, training contents, Objectively Verifiable Indicators will be discussed and agreed in the minutes of the meeting (M/M). If necessary, revise PDM.

3.9 Support the conclusion of the Minutes of Meeting (M/M) on training contents.

Based on the agreement in Activity 8, create M/M draft and support the conclusion of the M/M between MoNE, TIKA and JICA.

3.10 Develop and distribute GI (General Information) to target countries.

Based on the developed curriculum in Activity 3 and training schedule in Activity 6, develop GI for both Country-Focused Trainings and Group Training. It will be sent to target countries through TIKA local offices.

3.11 Select participants for the Group Training.

Improve the difficulties faced in the previous trainings, select participants for the Group Training.

3.12 Arrange logistics for the implementation of the Country-Focused Training and Group Training courses.

Improve the difficulties faced in the previous trainings; arrange the logistics for training implementation.

3.13 Implement trainings.

Improve the difficulties faced in the first and second year of trainings, implement the trainings.

3.14 Evaluate contents of the implemented trainings.

In each course, collect information from participants through questionnaires regarding evaluation for training contents, management, trainers, training materials etc. At the same time, collect information from the organizers, regarding problem, difficulties faced during the implementation of the trainings. Those results will be analysed and shared as lessons learned, as good practices and as points to be improved for the next trainings. For the capacity development of the CP staffs, the evaluation will be guided to be implemented actively by CP staffs.

3.15 Conduct follow-up based on the plan.

Based on the follow-up plan developed in the first year (See Progress Report 1, Annex 10), implement technical follow-up support activities. The technical follow up consists of monitoring of the trainees action plan after the training in Turkey and giving necessary technical advice using WBTSS. For the Kazakhstan Country Focused Training, is preparing for 2014 to conduct on-site follow up by the TTC Trainers.

3.16 Evaluate the impact of the training.

Conduct monitoring survey to ex-participants, regarding activities and application of the training achievement in their home countries. In addition, collect information regarding for sustainable activities in target countries, needs of training contents in the target countries, and needs in follow-up activities. That information will be analysed and used for improvement of the training contents.

3.17 Support the implementation of the JICA Terminal Evaluation

With the help of TIKA, MoNE and TTC, JICA will conduct Terminal Evaluation.

3.18 Develop the final project report.

In the end of the third year, the project will develop the final project report regarding achievements and progress of activities of the period. The report will be presented in JCC meeting.

3.19 Hold final Joint Coordination Committee (JCC) Meeting.

With the help of the project manager of the CP staffs, final JCC meeting will be held.

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Purpose of the dispatch

- To support the incorporation of the new IAT courses into the 4 pilot colleges participated in the Country Focused Training during 2012-2014. Followings are the specific objectives:
 - To conduct diagnostics of the current facilities, equipment, courses of the 4 pilot colleges participated to the training in Turkey and provide necessary advise for introduction of the new IAT course.
 - To conduct a joint workshop to develop teaching materials for the new IAT courses.

Period and Experts

- **Period**
 - September 2 to 14, 2014 (13 days)
- **Expert Team**

(Total of 5 person)

 - 1 Coordinator from TTC
 - A-Team: 2 Trainers from TTC
 - B-Team: 2 Trainers from TTC

Schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
		All: Departure From Izmir	To Astana	MOE/TIKV/NU/etc.		To Almaty
			To Taldyk	Taldykorgan Diagn.		To Almaty
			To Taraz	Zyambyl Diagn.		To Almaty
7	8	9	10	11	12	13
	To Almaty	All: Material Development Workshop				All: Departure From Almaty
	To Almaty					
	To Almaty					
14						
All: Arrive to Izmir						

Tentative schedule for the Procedures

Procedures	Estimated period
1. Request letter from Almaty College of Energy	July 1 st week
2. Request letter from MOE-KZ to TIKA Astana	July 3 rd week to 4 th week
3. Request from TIKA to MONE	July 4 th week to 5 th week
4. Procedures for Authorization in TIKA and MONE	Aug 1 st week to 2 nd week
5. Confirmation of the dispatch from TIKA to MOE-KZ	Aug 3 rd week
6. Dispatch of the experts	Sep. 1 st week to 2 nd week

Necessary expenses

- **Daily allowance and accommodation**
 - 5 trainers x 13 days
- **Transport**
 - Coordinator: from Izmir to Astana via Istanbul and Almaty
 - A-Team: from Izmir to Taldykorgan via
 - B-Team: from Izmir Taraz via Istanbul and Almaty
- **Translators**
 - Coordinator: In Astana for meeting at MOE-Kaz
 - A-Tam: Taldykorgan and Almaty
 - B-Team: from Izmir to Taraz via Istanbul and Almaty





Industrial Automation Technology Extension Project for Central Asian and Middle East Countries

Universities Survey Results on the situation of the Teachers Education for IAT and proposition of the extension project for TTC

Survey Period: 17 to 22 February, 2014

By Egemen Döğer, IAT Dep. Head, MZ



The Purpose of the Survey

To visit the neighboring Universities where
opened for a while, to collect and identify the
situation of the facilities, curriculum, materials
and trainers as well as to discuss the possibilities
for the future cooperation with TTC regarding
the acceptance of the training in Izmir.

Survey Team

1. Egemen Doğer, Head of IAT Department, MZ TV High School
2. Gurcan Birdir, TTC Coordinator
3. Bülent Vardal, IAT Trainer
4. İsmail Aktaş, IAT Trainer
5. Ayako Nakazato, JICA Expert
6. Takujiro Ito, JICA Expert

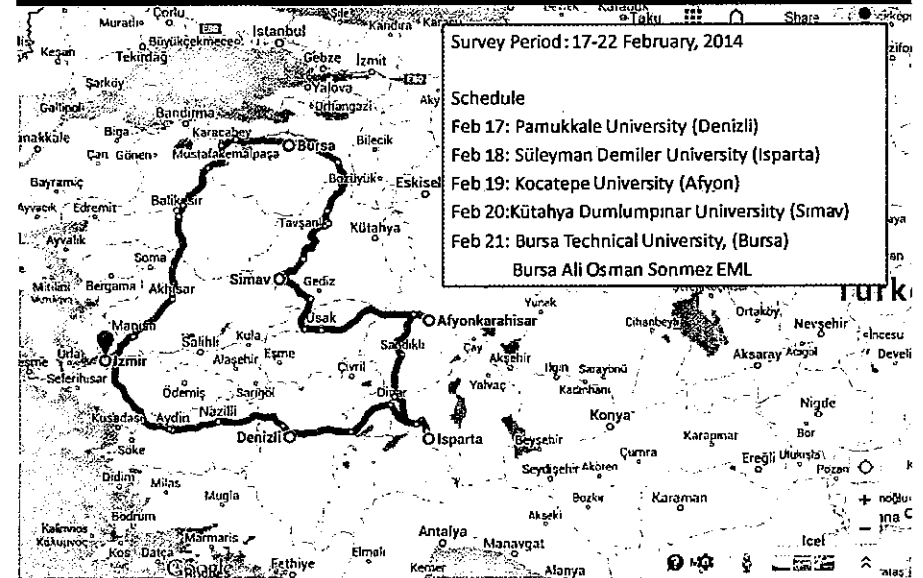


Survey Itinerary and Schedule

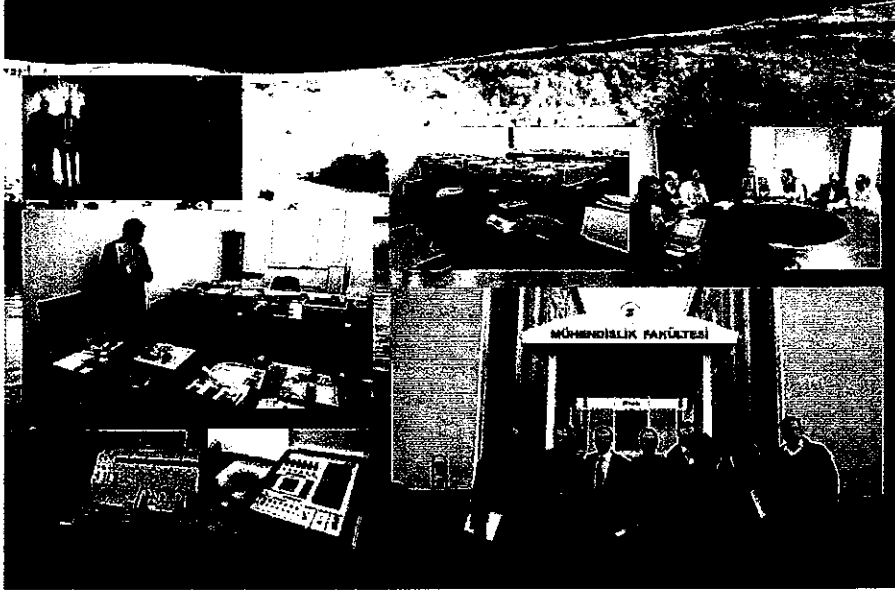
Survey Period: 17-22 February, 2014

Schedule

- Feb 17: Pamukkale University (Denizli)
 - Feb 18: Süleyman Demirel University (Isparta)
 - Feb 19: Kocatepe University (Afyon)
 - Feb 20: Kütahya Dumlupınar University (Simav)
 - Feb 21: Bursa Technical University, (Bursa)
- Bursa Ali Osman Sonmez EML



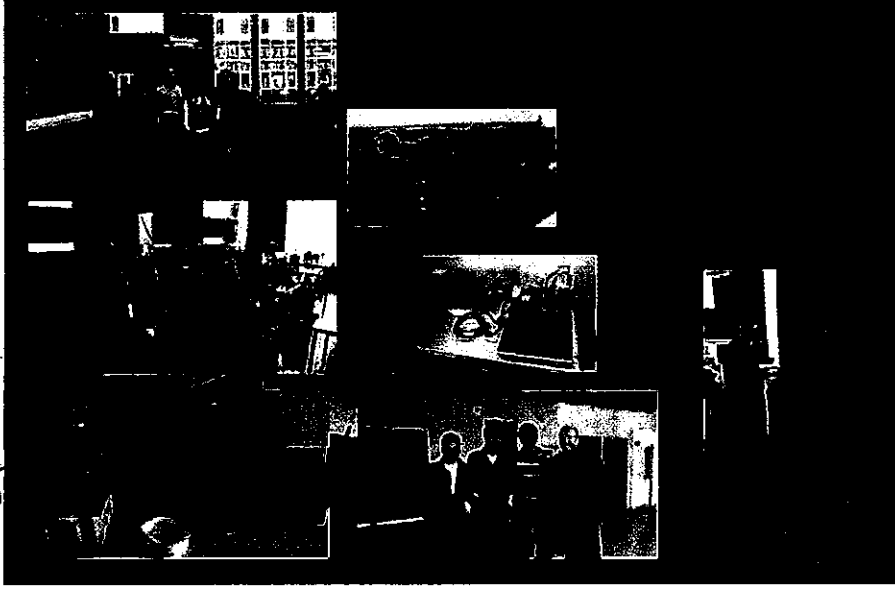
1. Pamukkale University, Denizli



2. Süleyman Demirel University, Isparta



3. Kocatepe University, Afyon



4. Kütahya Dumlupınar University, Simav



5. Bursa Technical University, Bursa



Results 1: About the Faculties of Technology

- Technology Faculties were established in 2010 in order to offer applied technology courses and develop skilled human resources for the industrial field.
- The mayor difference between the ongoing engineering Faculty courses is that the students can obtain diploma as Engineer as well as diploma for teaching the technical subjects in Technical Vocational High Schools.
- From 5 universities we visited during this survey, first 4 are the universities offering mechatronics teaching license course.
- They give advantage for accepting TVE High School graduates (30% of the vacancy) by providing extra points. The TVE HS graduates are weak in Math and Science so why they have to take additional 1 year supplementasry lesson.

6. Bursa Ali Osman Sonmez Industrial Vocational High School



Results2: situation of the Universities

- Lab for Electric/Electronic have only basic equipment similar what high school are using. Other faculties has expensive equipment such as CNC and 3D Printer.
- About the mechatronic education materials few universities has motor, pneumatics, electric circuit, PLC but not Mechanism and system for controlling the actuators.
- For the authorization of the course, curriculum was set but Lab and materials are not yet ready.

Results2: situation of the Universities

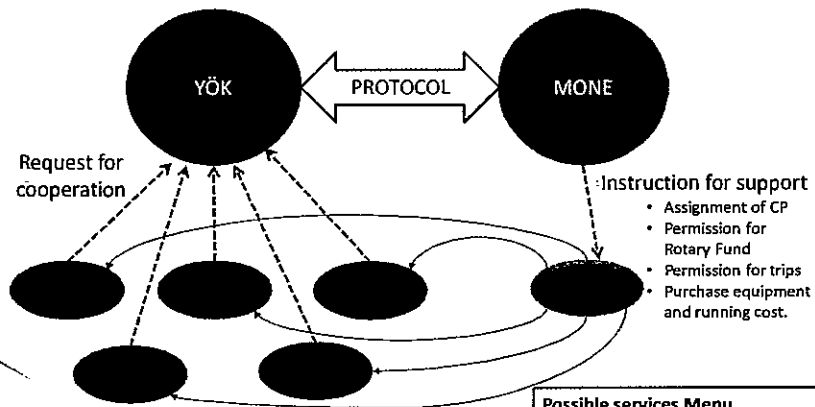
- Lack of Mechatronics academic staff
- Lack of Mechatronics Knowledge and Experience on academic staff
- In the universities far from industrial cities, is difficult to make good arrange of the factory practice of the students
- Only Kocatepe and Bursa is running the course, while Pamukkale, S. Demirel and Simav could not start yet the course due to lack of teachers, laboratory and materials

Results3: Request from the universities

- To train Academic staff of the universities at TTC.
- To conduct Mechatronics practice of the students at TTC.
- To send short-term lecturers from TTC.
- To receive consulting service from TTC staff for establishing the Mechatronics lab, development of the curriculum and materials
- To transfer the function of TTC to the university (S. Demirel Univ.)

Procedure for offering the services to the universities

1. Protocol between YÖK and MONE

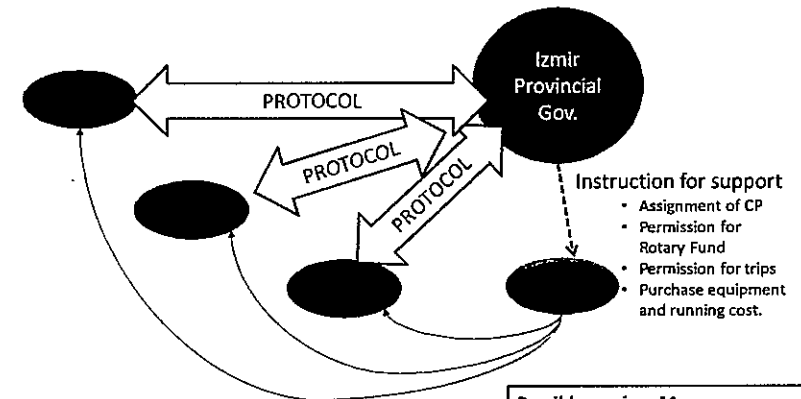


Possible services Menu

- Dispatch of IAT Lecturers
- Consultation for IAT Lab setting
- Technical support for Curriculum and material development on IAT
- Acceptance of Teachers training on IAT
- Acceptance of students training on IAT
- Support for Factory practice

Procedure for offering the services to the universities

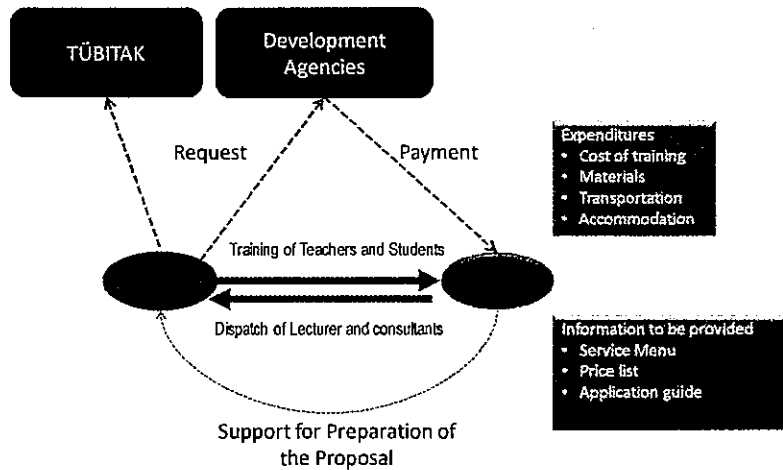
2. Protocol between Individual Universities and Izmir Provincial Gov.



Possible services Menu

- Dispatch of IAT Lecturers
- Consultation for IAT Lab setting
- Technical support for Curriculum and material development on IAT
- Acceptance of Teachers training on IAT
- Acceptance of students training on IAT
- Support for Factory practice

3. Request of the Fund



Results5: Conclusion

1. The situation of the universities in charge of the IAT teachers training for TVE High School is critical.
2. Universities are aware of the situation too.
3. The knowledge, experience, training environment and human resources of the TTC is suitable to support the universities.
4. There was request of technical support from all 5 universities.

Results5: Conclusion

5. Universities can propose to YÖK and request MONE for the protocol.
6. About the cost, is possible to cover with found of TÜBİTAK and Regional Development Funds.
7. Initially could start with 4 neighboring universities focusing for Pre-service teacher training for TVE High School and then, expand in the future to other 5 universities.

Proposing Extension of the Project

Proposing extension of the project

- **Objective of the extension:**

- 1) Support the achievement of overall goal of the IATE project (Follow up of the IATE)
- 2) Support the improvement of the Turkish IAT teachers training (Follow-up of the SPREAD)

Proposing extension of the project

- **Components**

- 1) 3rd country project to support the extension of the IAT courses in Kazakhstan.
- 2) Group training on IAT for Central Asian and Middle east countries to promote the IAT education
- 3) Group training on IAT for Turkish Science and Technology faculties school of mechatronics.
- 4) To conduct in service training by using experience from the projects (whole year program and teacher assignment)



**MINUTES OF MEETING
BETWEEN
THE AUTHORITIES CONCERNED OF
THE GOVERNMENT OF THE REPUBLIC OF TURKEY
AND
JAPAN INTERNATIONAL COOPERATION AGENCY
ON
JAPANESE TECHNICAL COOPERATION
FOR
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES IN THE REPUBLIC OF TURKEY**

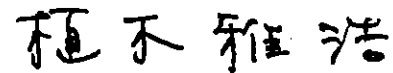
For the purpose of conducting Terminal Evaluation of "The Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey (hereinafter referred to as "the Project"), a Joint Evaluation Team (hereinafter referred to as "the Team") was formulated for the duration of September 15th to 27th, 2014. The Japanese Team, organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), was headed by Mr. Masahiro UEKI, Senior Representative of JICA Turkey Office, and the Turkish Team, organized by General Directorate of Vocational and Technical Education, Ministry of National Education (hereinafter referred to as "MoNE"), was led by Ms. Şennur ÇETİN, Head of Department.

During the evaluation, the Team conducted field survey, exchanged views, and had a series of discussions with personnel concerned with the Project. As a result of the evaluation, the Team agreed to report to their respective Governments the matters documented in the Terminal Evaluation Report as per attached.

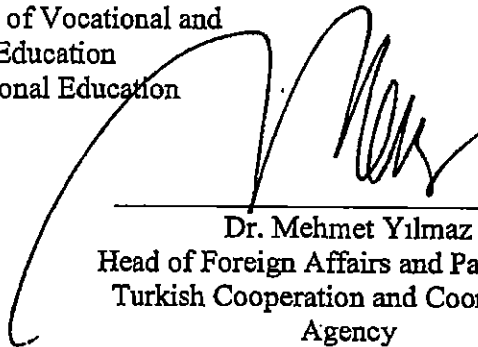
Ankara, September 26, 2014



Mr. Osman Yildirim Y.
Acting Director General
General Directorate of Vocational and
Technical Education
Ministry of National Education



Mr. Masahiro Ueki
Senior Representative
JICA Turkey Office



Dr. Mehmet Yilmaz
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

Joint Terminal Evaluation Report

on

**The Industrial Automation Technology (IAT)
Extension Project for Central Asian and Middle East
Countries in The Republic of Turkey**

September 26, 2014

List of Abbreviations and Acronyms

Abbreviation	Official Name
CFT	Country Focused Training
C/P	Counterpart
GDTVE	General Directorate of Vocational and Technical Education
GT	Group Training
IAT	Industrial Automation Technology
JCC	Joint Coordination Committee
JICA	Japan International Cooperation Agency
M/M	Minutes of Meeting, Man Month
MoNE	Ministry of National Education
MZTVH	Mazhar Zorlu Technical and Industrial Vocational High School
OVI	Objectively Verifiable Indicator
PDM	Project Design Matrix
PO	Plan of Operations
R/D	Record of Discussion
SPREAD	The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department
TCTP	Third Country Training Program
TIKA	Turkish Cooperation and Coordination Agency
TTC	Teachers Training Center
TTVH	Konak Nevvar Salih İşgören Hotel Management and Tourism Vocational High School
WBTSS	Web-Based Training Support System

Exchange Rate

EUR1 = JPY136.9

USD1 = JPY103.77

TRY1 = JPY48.06

(JICA rate for September, 2014)

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1. Introduction

1-1. Background and Purpose of the Evaluation

(1) Background of the Evaluation

The Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries (the "Project") is a technical cooperation with the aim of enhancing the technical education and vocational training capacity on the IAT of the target countries: Azerbaijan, Kazakhstan and Pakistan for the country-focused training, and Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan for the group training.

In response to the request from the Government of the Republic of Turkey, the Japan International Cooperation Agency (JICA) dispatched a Detailed Planning Survey Team in November 2011 and concluded an agreement on cooperation framework, whose details were documented in Record of Discussions (R/D) and signed in November 28, 2011. Based on the signed R/D, the Project was launched in February 2012 with Ministry of National Education (MoNE) as Implementing Agency and TIKA and JICA as Supporting Agencies. Teacher Training Center (TTC) of Mazhar Zorlu Technical and Industrial Vocational High School (MZTVH) under the jurisdiction of MoNE is the site of the Project with its teachers as Counterpart ("C/P").

Prior to the Project completion in April 2015, as per R/D signed by both governments, the terminal evaluation of the Project was conducted by the Joint Terminal Evaluation Team ("the Terminal Evaluation Team"), comprised of representatives from both sides, with the objective of assessing and confirming Project's performance and effects, as well as drawing lessons for similar future activities.

(2) Purpose of the Evaluation

The purposes of the evaluation are as follows:

- 1) To confirm the achievement levels of Inputs and Outputs and the prospect for the Project Purpose to be achieved by the end of the project period, and the Overall Goals within three to five years after the project completion, based on the Project Design Matrix (PDM) version 2 (see Annex 5);
- 2) To identify factors or issues that have promoted or hindered the implementation of project activities;
- 3) To conduct a comprehensive evaluation from the viewpoints of five evaluation criteria; Relevance, Effectiveness, Efficiency, Impact and Sustainability (see 2-2 "Criteria of the Joint Terminal Evaluation" for their definitions);
- 4) To draw recommendations of the measures to be taken for the Project's further improvement

and identify lessons learned to be referred to by similar JICA projects; and

- 5) To discuss and agree on the direction of the Project and prepare a joint terminal evaluation report based on the results of the discussions.

1-2. Members and Schedule of the Evaluation

(1) Members of the Evaluation

The members of the Terminal Evaluation Team are as follows:

1) Japanese Side

Name	Title	Position/Organization
Mr. Masahiro UEKI	Leader	Senior Representative JICA Turkey Office
Ms. Miyuki KONNAI	Evaluation Management 1	Project Formulation Adviser JICA Turkey Office
Dr. Emin ÖZDAMAR	Evaluation Management 2	Senior Program Officer JICA Turkey Office
Dr. Maki TSUMAGARI	Evaluation and Analysis	Partner, IMG Inc.

2) Turkish Side

Name	Title	Organization
Ms. Şennur ÇETİN	Head of Department	General Directorate of Vocational and Technical Education, MoNE
Dr. Mehmet YILMAZ	Head of Department	Foreign Affairs and Partnerships Department, TIKA
Mr. Yusuf VURAL	Acting Principal	Mazhar Zorlu Technical and Industrial Vocational High School
Mr. Gürcan BILDIR	Coordinator/IAT Trainer	Mazhar Zorlu Technical and Industrial Vocational High School/TTC

(2) Schedule of the Evaluation

The Evaluation was conducted from September 15th to 27th, 2014 (see Annex 1 for the Evaluation Schedule).

1-3. Outline of the Project

(1) Background of the Project

The Government of the Republic of Turkey has focused on implementing policy measures to strengthen its global competitiveness of manufacturing industries, and to introduce advanced technology and promote capital intensive industries to enable the delivery of high valued products and services since the 1990s. The Government of the Republic of Turkey has in conjunction prioritized the improvement and strengthening of technical and vocational education schools so as to

supply the labor market with capable technicians and skilled human resource. In this context, the Project “Establishment of Industrial Automation Technologies Departments in Anatolian Technical High Schools” was successfully carried out jointly by the General Directorate of Vocational and Technical Education (GDVTE) of MoNE and JICA from 2001 to 2006 with the aim of establishing IAT departments with international standard. Through the project, IAT departments were established at Anatolian Technical High Schools in Izmir and in Konya respectively.

Following the successful implementation of the above-mentioned project, MoNE subsequently set up IAT departments in 20 schools. In addition, the Teacher Training Center (TTC) was established at Izmir MZTVH in 2006 with the aim of developing the teaching staff who will work at the IAT departments of the 20 schools. Founded on the training provided at these schools as well as at the TTC, nationwide extension of the industrial human resources technology education progressed.

By the completion of the afore-mentioned project, “Ninth Development Plan of Turkey (2007-2013)” was formulated as the country’s national development policy, re-emphasizing the importance of strengthening human development axis. This emphasis provided a ground for project concerned areas to be further up-taken, and led to the technical cooperation “The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department” (SPREAD) (2007-2010) which established teacher training implementation system at Izmir MZTVH TTC. During the life of the project, TTC developed teacher training curriculum as well as syllabus for 16 courses, and conducted training for 727 teachers drawn from the technical schools nationwide by the time of its terminal evaluation conducted in 2010. After the completion of the project, TTC further expanded its implementation and management system for teacher training on industrial technology, by introducing e-learning and training for practitioners of private companies.

Against such backgrounds, the Government of the Republic of Turkey, gaining confidence through these successful initiatives, decided to transfer the knowledge and experiences acquired through the above-mentioned projects to vocational and technical teachers of IAT (including electric-electronics, mechatronics, mechanics, and ICT) fields in the countries in Central Asia and Middle East regions by means of providing training at TTC of Izmir MZTVH. In response to the request by the Government of the Republic of Turkey to the Government of Japan (GoJ) for assistance, JICA dispatched the detailed planning survey team to Turkey in November 2011, and agreed on the framework for this technical cooperation. Within the country MoNE requested support from Turkish Cooperation and Coordination Agency (TIKA) for project implementation. The Project was then launched in February 2012 and is scheduled to continue through April 2015.

(2) Summary of the Project

Overall Goal	Technical education and vocational training capacity on IAT of target countries is enhanced.
Project Purpose	Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.
Project Outputs	<ol style="list-style-type: none">1. Training for target group is appropriately planned.2. Training for target group is effectively provided.3. Follow-up system is established.
Project Period	From February 2012 to April 2015 (Three years and 3 months)
Implementing Agency	Ministry of National Education (MoNE)

2. Methodology of the Evaluation

2-1. Framework

In accordance with the *New JICA Guidelines for Project Evaluation* (the First Edition, 2010), the Terminal Evaluation Team evaluated the Project, taking the following steps:

- Step 1. Prepare an evaluation grid that lists evaluation questions, data/information necessary for evaluation and information sources;
- Step 2. Collect data and information necessary for the evaluation;
- Step 3. Assess the Project's achievements in reference to the PDM ver. 2;
- Step 4. Analyze the factors that promoted or inhibited the Project's achievements, including factors relating to the project design and the project implementation process.
- Step 5. Analyze the Project from the viewpoints of five evaluation criteria, defined in 2-2 "Criteria of the Joint Terminal Evaluation";
- Step 6. Draw recommendations from the analysis;
- Step 7. Share the preliminary evaluation results with stakeholders and discuss the future directions of the Project; and
- Step 8. Reach an agreement on the evaluation results between the Japanese and Turkish sides.

2-2. Criteria of the Evaluation

Five evaluation criteria used in the evaluation are defined as follows:

Relevance	Relevance is assessed in terms of the Project's validity in relation to the Government policy of Turkey, Strategic Plan of MoNE and TTC at the evaluation stage, Japan's Official Development Assistance (ODA) policy, and the needs of the Project beneficiaries, as well as the appropriateness of the project approach to address the needs.
Effectiveness	Effectiveness is assessed based on the prospect of achieving the Project Purpose by the end of the project period and whether this is due to the Project's Outputs.
Efficiency	Efficiency is assessed by focusing on the relationship between Outputs and Inputs in terms of timing, quality and quantity of Inputs. It measures to what extent Project Inputs have economically been converted into Outputs in consideration of the achievements of both Inputs and Outputs.
Impact	Impact is assessed based on the prospect of achieving the Overall Goals within three to five years of the project completion and the positive and negative changes to be produced, directly or indirectly as a result of project implementation.

Sustainability	Sustainability is assessed in terms of institutional, organizational, financial and technical aspects, by examining the extent to which the achievements of the Project will be maintained or further expanded by the Turkish side after the project period.
-----------------------	--

2-3. Evaluation Grid and Data Collection Methods

(1) Evaluation Grid

The Team evaluated the Project based on the evaluation questions listed in the evaluation grid (see Annex 4 for the list of evaluation questions and evaluation results of the questions.). The evaluation grid is comprised of three sections: (1) Project achievements; (2) Implementation Process; and (3) Evaluation by the Five Criteria.

(2) Data Collection Methods

The following sources of information and data were used in the joint terminal evaluation:

- 1) Interviews based on pre-distributed questionnaires with the Project's Japanese Expert (Expert), Counterpart Personnel (C/P), and other people concerned with the Project (see Annex 2 "List of Interviewees");
- 2) Documents agreed upon by both sides prior to and/or during the course of the Project implementation;
- 3) Records of inputs from both sides and activities of the Project (see Annex 3 "Inputs");
- 4) Site inspection at TTC;
- 5) Documents that provide data and information indicating the degree of achievements of the Project Outputs, Project Purpose, and Overall Goal, and
- 6) Policy documents that show the project's relevance and sustainability.

3. Performance and Implementation Process of the Project

3-1. Performance of the Project

3-1-1 Inputs

(1) Japanese Side

The Japanese side provided the following inputs to the Project (see Annex 3-1 “Inputs by the Japanese Side” for details.).

1) Assignment of Experts

The Japanese side has assigned five experts to the Project. The expertise and assigned periods of experts are the following. (see Annex 3-1-1 “Assignment of Experts”).

Table 1. Expertise and Assigned Period of Experts

Expertise	Number (Person)	Assigned period (M/M)
Chief Advisor/Training Management/Curriculum Development 1	1	13.50
Curriculum Development 2	1	7.00
Industrial Automation Technology	1	1.27
Coordinator/Training Management Assistance	1	6.76
Coordinator/Training Management Assistance (since September 17, 2014)	1	1.07
Total	5	29.60

Note: This M/M covers the actual assignment up to August and estimates from September, 2014. JICA hired lecturer on instructional design is not included.

2) Training in Japan

The Japanese side has provided one training program in Japan to three managers of MoNE in November 2013, titled “Field Observation of Human Development for LAT in Japan.” (see Annex 3-1-2 “Training in Japan”).

3) Provision of Equipment and Materials

The Japanese side has provided equipment required for the effective implementation of the Project, as listed in Annex 3-1-3 “Provision of Equipment and Materials”, which amounted to EUR 66,507 (approximately JPY 9.1 million) (see Annex 3-1-3 “Provision of Equipment and Materials”).

4) Operational Expenses by Japanese Side

The Japanese side has allocated the total amount of TRY 1 million (JPY 48.2 million) for the operational costs of project activities (see Annex 3-1-4 “Operational Expenses by Japanese Side”).

(2) Turkish Side

The Turkish side has provided the following inputs to the Project. (see Annex 3-2 "Inputs by the Turkish Side" for details.)

1) Assignment of C/Ps

The Turkish side has assigned one Project Director, one Project Manager, five to seven IAT Trainers at a time from TTC as C/P (see Annex 3-2-1 "Assignment of C/P Personnel"). Also, one representative from TIKA served on JCC assisted by one to three Experts at a time from the organization (see Annex 3-2-2 "Assignment of TIKA Representatives").

2) Facilities

The Turkish side has provided office space at TTC as well as five laboratories.

3) Provision of Equipment and Materials

The Turkish side has provided equipment required for the effective implementation of the Project, as listed in Annex 3-2-3 "Provision of Equipment and Materials), which amounted to TRY 301,046.35 (approximately JPY 14.5 million) (see Annex 3-2-3 "Provision of Equipment and Materials").

4) Operational Expenses by Turkish Side

The Turkish side has allocated the total amount of TRY 829,536 (approximately JPY 39.9 million for the operational costs of project activities¹ (See Annex 3-2-4 "Operational Expenses by Turkish Side").

¹ This amount is inclusive of TIKA's TRY101,046 contribution for equipment.

3-1-2 Achievements of Outputs

(1) Achievements of Output

Output 1: Training for target group is appropriately planned.
Objectively Verifiable Indicators (OVI)
OVI 1-1. Appropriate training targets are set for each country focused training country.
OVI 1-2. Appropriate training targets are set for group training.
OVI 1-3. Appropriate training plans are prepared for country-focused training program.
OVI 1-4. Appropriate training plans are prepared for group training program.

As per discussed below, all the above mentioned indicators set for Output 1 have been met by the time of the Terminal Evaluation and thus **Output 1 is considered achieved.**

Regarding “OVI 1-1. Appropriate training targets are set for each country focused training country,” 2012 June Needs Survey for CFT target countries (i.e. Pakistan, Kazakhstan, and Azerbaijan) led to the production of the country specific three year program which were discussed with their own governments. While agreement document on IAT training at TTC was only signed by Pakistan, the results of the Needs Survey were submitted to, and received by, the Ministry of Education and Science in Kazakhstan and the Ministry of Education in Azerbaijan. The Needs Survey for Uzbekistan was canceled, but an agreement was reached to invite technical teachers from Uzbekistan to GT. The training targets for Azerbaijan were revised at the 5th JCC in November 2013 to conduct two IAT Basic Courses for different participates (in lieu of IAT Basic and Intermediate Courses to the same participants) to align with the extent of commitment of Azerbaijan’s Ministry of Education.

On “OVI 1-2. Appropriate training targets are set for group training,” 4 GT TVE managers from the target countries were invited to the first GT course in November 2012. Through the training, the needs of the contents that would be taught in the subsequent courses were identified along with possible goals, and the contents were developed.

With respect to “OVI 1-3. Appropriate training plans are prepared for country-focused training program,” during June 2012 Needs Survey, training plans for Azerbaijan, Kazakhstan, and Pakistan were expanded, and the survey team reached agreements with the representatives from the respective Ministry of Education.

Likewise, on “OVI 1-4. Appropriate training plans are prepared for group training program,” based on the targets developed for GT in 2012, training plans and a course schedule for the IAT Basic Course were developed.

(2) Achievements of Output 2

Output 2: Training for target group is effectively provided.

Objectively Verifiable Indicators (OVIs)

- OVI 2-1. 70% of the course participants are satisfied in terms of course content, course management and accommodation services in GT courses and CFT courses.
- OVI 2-2. At least 80% of participants in country focused training achieve the 70 % of the learning performance.
- OVI 2-3 At least 80% of participants in group training achieve the 70% of the learning performance.

Four training courses are yet to be conducted between the Terminal Evaluation (September 2014) and the completion of the Project period. However, based on the following high prospects for meeting each indicator, the achievement of Output 2 is deemed probable:

On “OVI 2-1. 70% of the course participants are satisfied in terms of course content, course management and accommodation services in GT courses and CFT courses,” other than for accommodation part of the evaluation, participants’ satisfaction has been recorded meeting the indicator (e.g. as of March 2014, eight out of the total nine courses are evaluated as satisfactory by more than 80% of the participants in course content and course management), endorsing that the quality, relevance, and the delivery of the prepared courses surpassed the expectation of the participants. In the Pakistan CFT Intermediate Course evaluation, accommodation part resulted in only 20% of the participants having been satisfied. This was due mainly to the nature of transition period of TTC accommodation management from Mazhar Zorlu Technical and Industrial Vocation High School to Alsancak Nevvar Salih Işgören Hotel Business and Tourism High school, when service quality was not yet stabilized. Over one year has passed since the handover during which time the Project continued to provide guidance and supervision to enhance service provision quality management as well as facility maintenance guidance. Current high occupancy rate suggests that the accommodation part of the evaluation that will be administered as a part of the remaining course evaluation will receive scores meeting this indicator.

In connection with “OVI 2-2. At least 80% of participants in country focused training achieve the 70 % of the learning performance,” four CFT for TVE Trainers were conducted before March 2014. However, only one was evaluated with the revised version of the Learning Performance Evaluation (ver. 3), since it was prepared after revision of this indicator. This Evaluation incorporated guidance by the JICA-dispatched lecturer on instructional design, and is designed to capture incremental progresses and/or bottlenecks of the participants’ daily learning through the end of day checking, ensuring that based on this data the C/P can accommodate necessary adjustment to the individual participant’s learning for the next day. Such a mechanism is expected to ensure close monitor of and

support to the performance of the participants in the remaining two GT and lead to the achievement of this indicator.

Likewise, "OVI 2-3. At least 80% of participants in group training achieve the 70% of the learning performance" is envisaged to be met. Two GT for TVE Trainers were conducted before March 2014, among which only one was evaluated with the revised version of the Learning Performance Evaluation (ver. 3), since it was prepared after revision of the indicator. The last two GT courses (November and December 2014) will be evaluated with the revised Learning Performance Evaluation and the result will be monitored for further conclusion. As stated already in reference to OVI 2-2., this Evaluation incorporated guidance by the JICA-dispatched lecturer on instructional design, and is designed to capture incremental progresses and/or bottlenecks of the participants' daily learning through the end of day checking, ensuring that based on this data the C/P can accommodate necessary adjustment to the individual participant's learning for the next day. Such a mechanism is expected to ensure close monitor of and support to the performance of the participants in the remaining two GT and lead to the achievement of this indicator.

(3) Achievements of Output 3

Output 3: Follow-up system is established.

Objectively Verifiable Indicators (OVIs)
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OVI 3-1. Web-based information system is developed, installed and introduced during the training.

OVI 3-2. Training impact is properly assessed in second and third year in CFT countries, identifying the degree of utilization, its affecting factors, and recommendation(s) for improvement.

OVI 3-3. Training impact is properly assessed in second and third year in GT countries, identifying the degree of utilization, its affecting factors, and recommendations for improvement.
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On the part of TTC, thorough preparation for the web-based information system as well as for the administration of the follow-up survey have been managed. However, for the system to be established for actual functioning, engagement of trained participants is essential, so that data for training impact assessment is gathered. As overall level of such engagement of the trained participants have been far from adequate, and this trend cannot be turned around easily due to already identified difficulties (such as language and internet connection barriers), the prospect for achieving Output 3 is limited to the extent of the responses by the trained participants.

"OVI 3-1. Web-based information system is developed, installed and introduced during the training" is considered achieved by the time of Terminal Evaluation. The developed web-based training support system -WBTSS- has been introduced during the training to all the participants to date, and the same arrangement is planned for the rest of the course offering. However, except by Pakistani participants, this platform has barely been used due probably to lack of language interface (for non-English proficient participants), access to as well as familiarity with the internet, etc.

The prospect for achieving “OVI 3-2. Training impact is properly assessed in second and third year in CFT countries, identifying the degree of utilization, its affecting factors, and recommendation(s) for improvement” is modest. Monitoring Survey has been conducted for the three CFT courses in the follow-up period, and its collection rate is 68% (25 out of 37 participants). This rate includes 8 additional responses on the Basic Course filled and submitted when the Kazakhstan participants returned for the Intermediate Course. As this response suggests, it has been very difficult for the C/P to assume self-managed follow up activities.

Similarly, the prospect for achieving “OVI 3-3. Training impact is properly assessed in second and third year in GT countries, identifying the degree of utilization, its affecting factors, and recommendations for improvement” is modest. The collection rate of the already administered one GT survey was 55% (6 out of 11). In addition to the language and internet access barriers experienced with the CFT, the challenge for the GT comes from the arrangement. From the participant perspective it is one time commitment to attend the Basic Course, from which he/she might not have a clear sense of benefit for continued association through the follow up.

While the Project is planning to continue this monitoring, the challenge of post-training communication with the participants is expected to persist, and thus importance of proactive participation in this post-training period needs to be clearly communicated while the participants are attending the course, giving them the vision for value of such connection as their future resource for the obtained technical knowledge.

3-1-3 Prospect for Achieving the Project Purpose

Project Purpose: Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.

Objectively Verifiable Indicator (OVI)

A. Kazakhstan:

1. TVE administrators are aware of what and how to introduce IAT program into the TVE.
2. At least 4 TVE colleges are selected as IAT Pilot College.
3. At least 3 teachers from each pilot college become capable of teaching basic and intermediate IAT course as team.
4. Basic IAT course program(s) is/are developed based on the training at TTC.

B. Pakistan:

1. TVE administrators are aware of what and how to introduce IAT program in their schools.
2. At least 3 or more institutions are selected for the participation to training in TTC.
3. 10 teachers are trained in Basic, Intermediate and Advance IAT course at TTC.

C. Azerbaijan:

1. TVE administrators are aware of what and how to introduce IAT program in their schools.
2. At least one institution is selected as IAT pilot college.

3. 20 teachers are trained in Basic IAT course at TTC.

D. Group Training target countries

1. TVE administrators are aware of the importance of the IAT.
2. At least 10 teachers from each country are trained in basic IAT course.

The prospect for meeting the determined per-country (for CFT) or per-group (for GT) indicators is mixed, with high potential for Kazakhstan and Pakistan, while low for Azerbaijan and medium for GT countries. Therefore, the overall prospect for achieving the Project Purpose is fair.

A. Kazakhstan

For Kazakhstan, four indicators were determined in support of the Project Purpose achievement. The status of their achievement is as follows:

1. "TVE administrators are aware of what and how to introduce IAT program into the TVE" - Achieved: 9 Administrators attended CFT Executive Managers Course and the TVE Managers Course, both in November 2012, and based on the knowledge obtained, developed action plans to introduce the IAT program to their schools. The proposals were submitted to the Ministry of Education and Science in Kazakhstan.

2. "At least 4 TVE colleges are selected as IAT Pilot College" - Achieved: Kazakhstan's Ministry of Education and Science selected 4 TVE colleges as IAT pilot colleges (Almaty State Polytechnic College, Almaty State College of Energetic and Electronic Technologies, Taldykorgan College of Manufacturing Industry, and Zyambyl Polytechnic College).

3. "At least 3 teachers from each pilot college become capable of teaching basic and intermediate IAT course as team" - Achieved: In June 2013, three teachers each from the four pilot colleges attended IAT Basic Course and successfully completed the program. By the time of the Intermediate Course (June 2014), two of them (one each from Almaty State Polytechnic College and Taldykorgan College of Manufacturing Industry) had been transferred to other positions. Their slots were given to the other technical staff from the respective institutions with a condition that they will catch up by attending the Basic Course offered by Nazarbayev University prior to travelling to Turkey for the Intermediate Course at TTC. The condition was met and led to the achievement of this indicator.

4. "Basic IAT course program(s) is/are developed based on the training at TTC" were identified" - Prospect for achieving the indicator is high as per the status at the time of Terminal Evaluation (September 2014). At three out of the four Project participating institutions (i.e. Almaty State College of Energetic and Electronic Technologies, Taldykorgan College of Manufacturing Industry, and Zyambyl Polytechnic College), approval for the course offering has been obtained from the Ministry of Education and Science, followed by the development of the course program, and based

on which the course implementation has started. Including Almaty State Polytechnic College whose course application is at the Ministry of Education and Science review stage, IAT equipment procurement application is also at the Ministry of Education and Science for review for Almaty State College of Energetic and Electronic Technologies, Almaty State Polytechnic College, and Zyambyl Polytechnic College. Taldykorgan College of Manufacturing Industry has already secured budget for the equipment, and it is now being procured. While classes have started with the theoretical part in the first year, that will lead into lab work in the second year by which time equipment procurement is hoped to be complete. To ensure quality in the knowledge and skills offered through the course administration, dispatch of the Turkish C/P of this Project is being planned for April 2015.

B. Pakistan

For Pakistan, three indicators were determined in support of the Project Purpose achievement. The status of their achievement is as follows:

1. "TVE administrators are aware of what and how to introduce IAT program in their schools" - Achieved: Agreement of Memorandum was signed by the Project Needs Survey Mission Team and Mr. Qamar Zaman Ch., Secretary, Ministry of Professional Technical Training, Government of Pakistan. In addition, two high ranking administrators attended the CFT Executive Managers Course that was conducted in November 2012. The participants agreed that they will select appropriate TVE teachers for the CFT training in TTC, and the first course, IAT Basic, was successfully implemented in December 2012.

2. "At least 3 or more institutions are selected for the participation to training in TTC" - Achieved: The following 7 institutions were selected to send teachers to the Basic IAT Course (2012) and the Intermediate IAT Course (2013) – National Training Bureau (NTB), Islamabad; Technical Training Center, Quetta, Baluchistan; Govt Vocational Training Institute, Mirpur, Azad Kashmir; Government College of Technology, Rawalakot, Azad Kashmir; GVT Peshawar, Peshawar; STEVTA, Sindh; GCT Tangi, Charsadda, North West Frontier Province.

3. "10 teachers are trained in Basic, Intermediate and Advance IAT course at TTC" - Prospect for achievement of this indicator is high. During the Needs Survey before the start of the course, Pakistani Government agreed to send the same participants from the same institutions to be trained in Turkey in the course of the three year of the Project. Subsequently, Pakistani teachers participated in the Basic IAT Course in December 2012. In 2013, the same participants attended the Intermediate IAT Course in November 2013. The Advanced Course is scheduled for December 2014, and the same participants are expected to return to the TTC.

C. Azerbaijan:

For Azerbaijan, three indicators were determined in support of the Project Purpose achievement.

The status of their achievement is as follows:

1. "TVE administrators are aware of what and how to introduce IAT program in their schools" - Achieved: Eight administrators from Azerbaijan attended the CFT Executive Managers Course and the TVE Managers Course in November 2012. Based on the knowledge from the training, TVE Managers developed action plans to introduce the IAT program to their schools. The proposals were submitted to Azerbaijan's Ministry of Education, (Note: however, no further information on the progress of the action plans has been reported.)

2. "At least one institution is selected as IAT pilot college" - Prospect for achieving the indicator is low: During the June 2012 Needs Survey, Azerbaijan's Vocational Training Office DG mentioned the possibility of establishing an IAT pilot college. Yet 2013 September Basic Course participants were drawn from several TVE colleges, and none came from IAT pilot college. As of September 2014, no further development is confirmed.

3. "20 teachers are trained in Basic IAT course at TTC" - Prospect for achieving this indicator is uncertain: In 2013, nine teachers participated in the training at TTC. Participation of 10 other teachers in October 2014 Basic Course is sought. However, at the time of the Terminal Evaluation (September 2014) only five out of 10 applicants meet the eligibility criteria. Thus, further effort is under way to recruit the right cohort to implement the course as envisaged by the Project indicator. This issue of mismatch has challenged the Project: While the Project, with coordination support by TIKKA, has done its best to recruit the most suitable candidates for the training, the professionals who have most relevant background seem to be drawn from computer science, since the country does not have institutions related to IAT, from which to send the instructor participants.

D. Group Training target countries

For Group Training, two indicators were determined in support of the Project Purpose achievement. The status of their achievement is as follows:

1. "TVE administrators are aware of the importance of the IAT" - Achievement level of the indicator is medium. Eight administrators attended the GT TVE Managers Course in November 2012: Two from Kyrgyzstan, two from Tajikistan, zero from Turkmenistan, two from Afghanistan, and two from Palestine. Subsequently, a total of 18 TVE trainers attended the IAT Basic Courses – from Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, and Palestine (Plan was 24). However, no TVE trainers were received from Afghanistan as the applicants did not possess relevant background and did not meet the candidacy requirement. Follow up with Afghanistan had been agreed through TIKKA. However, at this stage, Afghanistan participation has faded out from the Project due to the country's domestic circumstances.

2. "At least 10 teachers from each country are trained in basic IAT course" - Prospect for achieving

the indicator is fair, based on the preparation status of November 2014 and January 2015 Basic Courses and continued uncertainty of appropriate participation from Afghanistan.

3-1-4 Prospect for Achieving the Overall Goal

Overall Goal:
Technical education and vocational training capacity on IAT of target countries is enhanced.
Objectively Verifiable Indicators (OVIs)
Trial IAT program(s) is/are introduced to the participant's institution.

The achievement of the indicator will require resource input (financial, technical, and logistical), either by own effort of the participating countries' Ministry of Education or through support by external sources. One emerging case is Kazakhstan, where additional/separate larger context input (e.g. Japanese Government resource for supporting small/medium sized business acquired in Kazakhstan channeled to the pilot institutions of this Project, World Bank assistance to educational institutes in Kazakhstan included the pilot colleges, etc.) has been secured to produce emerging results: At three out of the four pilot institutions, IAT course has started, with equipment purchase arrangement in process. Large part of accessing such further support has been arranged by the Project, reaching out to Kazakhstan as a part of Project activities. This kind of additional handholding required for meeting the Overall Goal will not be available to the other participating countries at post-completion stage of the Project period, and therefore, the prospect for achieving the Overall Goal (which is by default a goal for the implementing agency to achieve by own effort AFTER the Project period) against the preset indicator is fair.

3-2. Implementation Process of the Project

3-2-1. Implementation of Activities and Ownership in Implementation

At TTC, C/P, who not only possess distinguished technical expertise but also high moral and commitment in their professional service delivery, aided by never ending pursuit for betterment, strived to give their best in preparing the training programs, delivering the courses, and following up for improvement for Project execution. What is beyond their domain of business that was essential for their effort to bring results, is the communication with the participants beyond national borders where internet access might be more limited (not only as physical access but inclusive of cultural or habitual barriers that might exist) and/or language that prohibits direct communication, part of Project work discussed and agreed at JCC to be enhanced further. It turned out that the effective implementation of the planned activities require more managing, such as handholding and reaching out, than simple communication by sending out forms and collecting them. While it is clear that all the concerned parties have done their part within the scope of their mandate, glitches (e.g. no-responses to follow-up survey) hindered the smooth and effective implementation of the Project activities.

3-2-2. Project Management

The Project structure as per signed in the R/D (November 28, 2011) assumed international coordination part of the Project work is administered by “TIKA Target Country Office Staff” with “JICA Target Country Staff” providing “Coordinative Support” (p. 9), meaning these personnel are counted as actors in the Project. In some cases, country conditions became a hurdle for the parties to perform smooth triangular (i.e. as opposed to bilateral between Turkey and Japan only) collaboration.

4. Result of the Evaluation

4-1. Evaluation by the Five Criteria

4-1-1 Relevance: High

The relevance of the Project is evaluated as high based on the assessments from the five angles below:

(1) Relevance with the Government policy of the Republic of Turkey, particularly that pertaining to their own international cooperation agenda to the neighboring countries

The Project was planned and initiated in line with Turkey’s national development plan, “Ninth Development Plan of Turkey (2007-2013).” Its succeeding national policy “Tenth Development Plan (2014-2019)” also emphasizes international cooperation for development axis by sharing experiences with other countries, placing this Project an exemplary case of national policy execution.

(2) Alignment with strategic plan/direction of MoNE in regard to TVET

The government’s legislative document emphasizes pursuing national and international projects in TVET domain, endorsing that the Project is a well aligned realization of the direction of the sub-sector.

(3) Relevance with the needs of the participating countries

The participating countries as the Project’s target include the following countries: Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Pakistan, Palestine, Tajikistan, Turkmenistan, and Uzbekistan. Match of these countries for the Project had been determined during appraisal stage of the Project in reference to the national policies of the respective countries². Once it was launched, the Project

² As a part of Project formulation, JICA Turkey Office conducted needs survey and fleshed out specific and differentiated needs of the participating countries. Since this survey focused on the needs from the perspective of the industries, however, preparedness on the part of TVET institutions to initiate/upgrade IAT area were not identified to reflect into the Project design.

organized a mission to the countries to discuss specific arrangement so that each country would benefit most from the participation. The resulting arrangement, i.e. 1) Country Focused Training for Azerbaijan, Kazakhstan, Pakistan and 2) Group Training for Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan (with further sub-grouping for language specific streams, one in Russian and the other in English) reflected different stages of existing capacity in IAT training, as well as the direction that each country holds for its needs.

(4) Relevance with the Japan's ODA Policy

The Project is a precursor of Japan's ODA policy to Turkey that emphasizes supporting Turkey's position as an emerging donor to the Central Asia and the Middle East. The Memorandum of Understanding (MOU) between JICA and Turkish Cooperation and Coordination Agency (TIKA) signed in January 2012 in order to promote the joint projects and technical cooperation projects is a testament and a proof of the Project's significance to Japan-Turkey partnership for the latter's international cooperation.

(5) Comparative Empirical and Technological Advantage of Japan's Cooperation

Evidenced by the preceding, completed projects such as "Establishment of Industrial Automation Technologies Departments in Anatolian Technical High Schools (2001 to 2006)," "The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department (SPREAD) (2007-2010)", technical expertise in the area of IAT vocational training instruction has been recognized as a critical area where concerned parties in Turkey can benefit from Japanese expertise and collaboration. This point was further confirmed during the November 2013 CP training in Japan where MoNE's senior managers were exposed to the Japanese current practices that emphasizes experimental, project based, problem-solving focused vocational education for the technical areas concerned (See Annex 3-1-2 "Training in Japan").

4-1-2 Effectiveness: Fair

The effectiveness of the Project is assessed as fair, for the prospect for meeting the Project Purpose as determined by the indicators is mixed, with high potential for Kazakhstan and Pakistan, while low for Azerbaijan and medium for GT countries. For stronger achievers, Kazakhstan and Pakistan, CFT for Executive Managers as well as that for TVE Managers under Output 1 paved a way to secure high level engagement of the participating countries' Ministry of Education for later activities. Particularly for Kazakhstan, it is evident that the successful achievement of the Outputs coincided with parallel inputs and efforts that were drawn to the IAT pilot colleges from other sources, such as Japanese Government scheme for supporting small/medium sized business connected with the Project's IAT pilot colleges and World Bank assistance to educational institutes in

Kazakhstan.

In addition, Output 3 signified that without direct/effective interface for communication between the C/P and the participants, the prospect for achieving it is limited at most. Application process for the training participants had to be conducted as logistical and administrative matter led by TIKA. However, country specific situations added difficulty for enforcing technical relevance in the selection, resulting in the recruitment of less than ideal candidates in some cases.

According to the hearing by the Project to the training participants, the important assumptions³ are largely met by the stronger achievers (Kazakhstan and Pakistan): In Kazakhstan, three out of the four pilot colleges have already started the IAT course based on the TTC training results with associated equipment under procurement stage, and in Pakistan also, some of the institutions have started training on IAT.

4-1-3 Efficiency: High

The Efficiency of the Project is evaluated as high in view of the five dimensions of Input-Output relationships that the Project managed for results.

(1) Causality of Inputs and Outputs

The training schedule was prepared in accordance with the Turkish calendar. Given participating countries might be dictated by different budget/academic calendars, a diagnostic analysis on the best timing could have increased the efficiency of Input-Output relationship. Yet, annual schedule, planned well in advance and adjusted where necessary in close consultation with JCC has run satisfactorily, and converted inputs into outputs. The only bottleneck or leakage (such as no-response to the survey) arose where C/P do not have direct communication channel with the trained/to-be-trained participants to ensure input is converted into outputs.

(2) Achievements of Outputs

The important assumptions set for the Project at the launch, which were listed below, largely held to support the Outputs to be produced.

- As results of the need survey in CFT target countries, local government agreed the target institution and content recommended by the survey team.
- A discussion for training content identification was implemented among the GT target countries.

³ " Equipment are purchased by the participant institution," " IAT Curriculum(s) is/are approved by the Ministry of Education of target countries," and " Teachers trained in Turkey are assigned to conduct the new curriculum at each target country."

(3) Appropriateness of Inputs by Japan

The planned input was disbursed. However, in light of the evolving situations not foreseen at the planning stage (e.g. departure of many C/P from the preceding Project, that shrunk the C/P cohort down from around 25 personnel to seven at the Project start, which was further reduced to five due to staffing needs of the MZS), additional input was required for effective execution of the Project. In this relation, a short term expert on curriculum design was arranged. This input was highly valued by both the Japanese and Turkish sides with a remark that it would have been even more effective if this intervention was possible earlier in the course of the Project.

For training in Japan, "Field Observation of Human Development for IAT in Japan," 9-day trip for managers from General Directorate of Vocational and Technical Education (TVE), MoNE was implemented from November 16 to 24, 2013. This exposure not only exposed the MoNE managers to Japanese IAT practices and teaching approach but also to how JICA operates its aid activities. The feedback shared endorses that the training impacted Project Director and other MoNE managers closely associated with the Project, and supported to forge more informed environment to the rest of the Project implementation.

TTC trainers have highly valued Japanese equipment (e.g. OMRON) procured for their teaching activities over the course of the last 10 years (from the predecessor project time). Initially no plan was made to procure Japanese equipment for this Project. However, due to advice of the short term expert, it was arranged and is reported to have drastically contributed to teaching, as the procured system can be dissembled and re-assembled, to enable more visual conceptualization of the IAT system.

(4) Appropriateness of Inputs by the Turkish side

Turkish side also made the effort in securing resources to support the Project activities. The most challenging part of the resource acquisition related to the C/P assignment. Manpower needs to meet the planned activities at TTC was calculated at 77.7 MM/year requiring seven full time personnel. Yet, five C/P had to shoulder this load, each responsively performing more than one person's full time job.

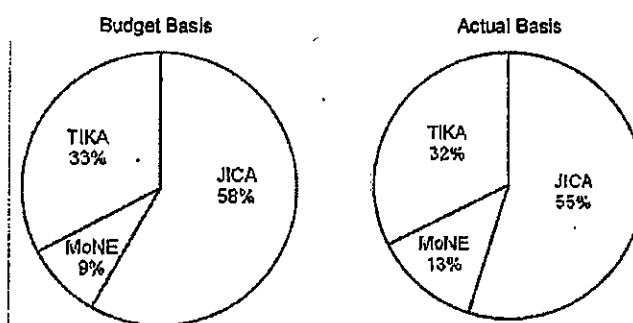
Turkish side contributed also to procure some equipment/supplies in the first and second year from TIKA budget. Due to unforeseen circumstances, however, the third year applicable budget of TRY 50,000 (approximately JPY 2.4 million) has not been disbursed. MoNE and TTC are expecting to spend this allocated amount in the near future.

(5) Adherence of each participating agency to the pre-determined contribution ratio

Overall, the original agreement for cost sharing signed in R/D that reads “Shared portion of JICA shall not exceed seventy percent (70%) of the total amount” was adhered (see Table 1) with JICA having contributed 55% of the total cost (on actual basis) up to September 2014.

Table 1: Cost sharing (up to September 2014) (TRY)

		JICA	MoNE	TIKA	TOTAL
2012	Budgeted	329,570.0	22,400.0	216,308.0	568,278
	Actual	358,311.0	44,100.0	186,340.0	588,751
2013	Budgeted	815,325.0	161,600.0	362,310.0	1,339,235
	Actual	469,685.6	161,600.0	276,975.0	908,261
2014	Budgeted	221,870.0	28,000.0	192,640.0	442,510
	Actual	175,532	28,800	131,720	336,052
BUDGET BASIS					
SUB-TOTAL		1,366,765	212,000	771,258	2,350,023
COST SHARING RATIO		58%	9%	33%	
BASED ON ACTUAL					
SUB-TOTAL		1,003,528.6	234,500.0	595,035.0	1,833,064
COST SHARING RATIO		55%	13%	32%	



4-1-4 Impact: Fair

One significant impact being emerged is with Kazakhstan, where additional/separate larger context input (e.g. Japanese Government resource for supporting small/medium sized business acquired in Kazakhstan channeled to the pilot institutions of this Project, World Bank assistance to educational institutes in Kazakhstan included the pilot colleges, etc.) has been secured to produce emerging results: At three out of the four pilot institutions, IAT course has started, with equipment purchase arrangement in process. Large part of accessing such further support has been arranged by

the Project, reaching out to Kazakhstan as a part of Project activities. While classes are already in progress, to ensure quality in the knowledge and skills to be offered at the course administration, MoNE, TIKa, and JICA have discussed and agreed on the dispatch of the Project's Turkish C/P to Kazakhstan as Third Country Experts. The arrangement is in the pipeline and when materialized, is anticipated to positively impact the achievement of the Overall Goal. It is reported that, Pakistani participants of the Project training are also willing to receive dispatch of Project's Turkish C/P to Pakistan as Third Country Experts. In addition, Pakistani Government is eager to launch legislation process for establishing centralized vocational school.

This kind of additional handholding required for meeting the Overall Goal will not be available to the other participating countries at post-completion stage of the Project period unless the Project can provide similar, proactive reach out to the rest of the participating countries. Therefore, the prospect for achieving the Overall Goal (which is by default a goal for the implementing agency to achieve by own effort AFTER the Project period) against the preset indicator is fair, suggesting the Project impart to be fair.

4-1-5 Sustainability: Fair

A comprehensive assessment, as described below, warrants a rating of fair for the sustainability of Project achievements.

(1) Institutional Aspect

Roles and responsibilities of the responsible parties of the Project were defined in R/D and understood among MoNE, TIKa, and TTC: MoNE to take the overall responsibility of the management and implementation of the Project, including the overall coordination among all the stakeholders; TIKa to coordinate the implementation of training, including coordination with its target country offices to liaise with the participants and their institutions; TTC to develop and deliver training, as well as to provide post-training follow up to the participants for later, in-country work. However, it is uncertain if the respective parties were fully aware of and ready to commit in the complexities involved with managing international training programs for which they do not have full control for envisaged results.

Each organization has own mandate that restricts them from flexibly and directly responding to the evolving needs that have popped up during the course of the Project. For example, while technical issues are best dealt by the TTC, they are not in a position neither have the ability to communicate with some participants with whom they do not share a common language. Such situations required the interface by translator(s) procured as a part of Project activities. Going forward, such complexities will remain, and while each challenge has been managed by the concerted efforts, pose a question on how institutional sustainability will be ensured beyond Project

period.

(2) Technical Aspect

Through the Project, C/P strengthened coordinative, managerial, and administrative capacity in planning, delivering, monitoring, and improving IAT training for trainers. Except for the Advanced Course⁴, the trainers have accumulated solid expertise for course administration. Since it typically takes multiple cycles of running a course for its program to be tested, refined, and standardized, for the C/P to become able to offer a full-fledged IAT training package of Basic, Intermediate, and Advanced Courses, running multiple cycles of courses, particularly those of the Advanced where there is less track record, would be preferable in order to build up technical sustainability. It has proven through the Project that their expertise as instructors of IAT field is of international value, which in turn is an important asset for Turkey as they can contribute to the capacity enhancement vision of the Turkish Government in strengthening its global competitiveness in manufacturing industries. It is hoped that their expertise will be utilized while maintaining exposure to the neighboring countries, so that findings from international exposure will feed into further innovation in the country also to enable Turkey to hold its competitive edge.

(3) Financial Aspect

Most of the funding that was budgeted has been secured. Continued effort is sought to ensure financial sustainability.

(4) Other factors that will affect the sustainability of the Project achievements

During the Project period, exhaustive discussions were held regarding sustainability of TTC. As of now, its status as an attached service entity to MZS is anticipated to continue beyond the Project period. The needs for their service, either domestic for in-service training, or international, as an implementation arm to realize Turkish Government's national policy that emphasizes international cooperation, is anticipated to continue, and therefore, the sustenance of this entity should be a common agenda to be prioritized.

4-2. Conclusion

The relevance of the Project is evaluated as high based on its close alignment with (1) Government policy of the Republic of Turkey, particularly that pertaining to their own international cooperation agenda to the neighboring countries, (2) strategic plan/direction of MoNE in regard to TVET, (3) the needs of the participating countries, (4) the Japan's ODA Policy, and (5) comparative

⁴ The first such course being organized as December 2014 CFT for Pakistan.

empirical and technological advantage of Japan's cooperation. The effectiveness of the Project is assessed as fair, for the prospect for meeting the Project Purpose as determined by the indicators is mixed, with high potential for Kazakhstan and Pakistan, while low for Azerbaijan and medium for GT countries. The efficiency of the Project is evaluated as high in view of the five dimensions of input-output relationships that the Project managed for results: (1) causality of inputs and outputs; (2) achievements of outputs; (3) appropriateness of inputs by Japan; (4) appropriateness of inputs by the Turkish side; and (5) adherence of each participating agency to the pre-determined contribution ratio. The prospect for achieving the Overall Goal against the preset indicator is fair, which in turn warrants a rating of fair for the Project impact. Project sustainability is also considered fair, based on a comprehensive assessment of the implementing agency's current institutional, technical, and financial aspects.

5. Recommendations and Lessons Learned

5-1. Recommendations

Based on the findings, Terminal Evaluation Team presents the following recommendations to be addressed by the completion of the Project, for which party/ies best positioned to take actions is/are specified:

5-1-1 Follow-up to secure technical sustainability through full-fledged IAT training course package (MoNE, TIKA, JICA, TTC)

In the course of evaluation study, technical sustainability of the Project produced achievements (refer to 4-1-5 "Sustainability", "(2) Technical Aspect") has emerged as the utmost important common agenda of all the parties involved with the Project. A concern has been raised that given only one Advanced Course is scheduled before the completion of the Project, it might not allow the Project to fully test and refine the Advanced Course Program to make a full-fledged IAT training course package (i.e., Basic, Intermediate, and Advanced Courses).

In light of such revelation, the Terminal Evaluation Team recommends the Project to be extended for certain period of time to accommodate sufficient time to organize and deliver additional trainings (that include Advanced) to select countries based on the pre-agreed criteria (e.g. such as in-country resource availability to found IAT departments) so that the tested and refined program will ensure the sustainability of the technical expertise established by the Project. The Terminal Evaluation Team confirmed with C/P that this recommendation does not interfere with the MoNE plan for the TTC to provide in-service training from April 2015 and considers such strengthening will add benefit to the quality enhancement of the in-service training they will be tasked to deliver. In order to sketch out that this recommendation is feasible, each party is requested to review the following and agrees course of actions at JCC in the nearest future possible:

- **TIKA:** As have already promised to the Terminal Evaluation Team, collect feedback from the Project participating countries on their further needs and preparedness for additional training opportunity. (Feedback received thus far: Pakistan, Palestine and Kazakhstan Programme Coordination Offices of TIKA informed that, the IAT programmes were found very beneficial. Kazakhstan and Pakistan officials informed the TIKA Programme Coordination Offices that they would like to continue the training courses in advance level.)
- **TTC:** Based on feedback obtained by TIKA, sketch out, on top of already scheduled 2015 in-service training, how much time and when such follow-up training activities can be scheduled.

- MoNE: Based on the analysis prepared by TTC above, determine when Project related follow-up training can be conducted, schedule wise, into TTC's 2015 calendar for in-service training that is planned under the supervision of MoNE.
- JICA: Based on the analysis prepared by TTC above, calculate resource requirement for the follow-up as well as how much can be provided by JICA.
- JCC: Discuss points mentioned above, and come up with an agreement for the follow-up.

5-1-2 Post-training communication with the participants with language/access challenges (TTC, TIKA)

Numerous challenges (primarily due to lack of common language between C/P and the participants and/or easy access to the internet on the part of the participants) have been experienced by the C/P for conducting web based follow-up survey after the participants return to respective countries. For the remainder of the training courses, therefore, participant-specified, support system consisting of (1) TTC C/P in charge of the participant's program, (2) TIKA Headquarter representative, and (3) the first-window-of-contact person at TIKA Office in the target country will merit for high risk participants. In order to ensure that the participant is aware that he/she is assisted by these three representatives who are networked between Turkey and his/her own country, pre-departure information should include who these people are with which numbers/e-mail addresses. Then upon arrival at TTC, the C/P should discuss with the participant the most preferred arrangement for his/her post-training communication. To ensure he/she will maintain communication post-training, the value of further networking with the IAT instructor and TTC should be made clear, as a resource for further consultation.

5-1-3 Dispatch of the Third Country Expert(s) (MoNE to coordinate TIKA, JICA, and TTC)

In consultation with JCC, dispatch of Project C/P to Kazakhstan as the Third Country Expert(s) is being planned to provide technical support in ensuring quality in the knowledge and skills offered in the courses created based on the Project's training, and is anticipated to take place in the early part of 2015. Realization of this dispatch will be an epoch-making event, endorsing how capacitated C/P are through the Project. As the Project's overall coordinator among all the stakeholders, leadership of MoNE in moving the preparation and materializing fruitful implementation is sincerely sought as a proof of the Project's tangible outcome.

It is hoped that the JCC agreement will become a point of departure for the Project produced achievements to further shape the future of IAT led technological advancement for Turkey and its neighboring countries.

5-2. Lessons Learned

Below are lessons drawn from the Project for reference to other JICA projects with shared characteristics:

- Utilization of Web based resources (Output 3 related): While demand for IT dependent information sharing system is expected to continue increasingly, caution should be paid if the beneficiary of the Project are IT literate, have easy and not-costly access to the service, and there are common language to enable direct communication.
- Crafting of post-training follow up (Output 3 related): For bidirectional communications to last post-training, it will be important to pre-plan and advocate the benefit of sustaining the connection, such as for receiving informed feedback, etc.
- Early acquisition of institutional commitment for the third country participation (Project Purpose related): As the case of Pakistan suggests, acquiring high profile commitment early on enforces smooth operation in later stages (assuming that the persons either stay in the important positions or move to places with even more influences).
- Applicability of Overall Goal (Overall Goal related): By definition, Project's Overall Goal should refer to anticipated longer term (3-5 years after the Project completion) effects that will be derived by the effort of the implementing agency due to furtherance of Project achievements. The Overall Goal of this Project did not factor in the necessity of large scale resource input (e.g. for purchasing IAT equipment) that is essentially a pre-requisite for the realization of the Goal.
- Mobilization of third countries' in-country resources to support triangular cooperation: (overall): As more aid recipient countries graduate from its status and moves to occupy a donor position in aid community, grant giving and receiving relationship changes into more of partnership to collaborate in support of third country assistance. There, clear, one-on-one accountability of receiving aid that is available to bilateral cooperation cannot be established, as while JICA provides support to the implementing agency, JICA might not have direct access to the third-country beneficiaries to seek accountability for the support provided. This Project, sought to manage nine-country-involved implementation by mobilizing third countries' in-country resources: In addition to bilateral arrangement with the target countries by the help of respective JICA country offices, the Project tapped other funding sources (e.g. World Bank, Ministry of Foreign Affairs of Japan), and tied them to support the institutions that send trainees to the Project.

Annex 1: Evaluation Schedule

Date		Schedule
15-Sep	Mon	11:55 Narita (TK051) → Istanbul (Evaluation Analysis) 20:00 Istanbul (TK2178) → Ankara
16-September	Tue	09:30 JICA Turkey office 14:00 MoNE Mr. Osman Yıldırım, Acting Director General, GDVTE Ms. Şennur Çetin, Head of Group, GDVTE Mr. Mehmet Yazar, Expert, GDVTE Ms. Kübra Karaibis, Assistant Expert, DVTE
17-September	Wed	10:00 TİKA Dr. Mehmet Yılmaz, Head of Foreign Affairs and Partnerships Ms. Ayşe ÖRÜN, Expert Ms. Berna GÜRKAŞ, Expert 15:55 Ankara (TK7010) → Izmir (Evaluation Management 1, Evaluation Analysis) 19:00 Dr. Takujiro Ito (Chief Advisor)
18 September	Thu	09:00 Observation tour of the TTC facilities 10:00 Project briefing by TTC CP and Expert 13:00-16:00 Group meeting with C/P
19 September	Fri	9:00-10:00 Mr. Yusuf VURAL (PM), Principal, MZ 11:00-12:00 Mr. Hasan KORKMAZ (former PM), Deputy Director of Provincial Education Office 15:55 Izmir (TK7009) → Ankara (Evaluation Management) 16:00 Dr. Takujiro Ito (Chief Advisor)
20 September	Sat	10:20 Izmir (TK7005) → Ankara (Evaluation Analysis) Report drafting (Evaluation Analysis)
21 September	Sun	Report drafting (Evaluation Analysis)
22-September	Mon	11:00 Draft Terminal Evaluation Report discussion at JICA Office 15:00 Draft Terminal Eval Draft Report discussion with MoNE Ms. Şennur Çetin, Head of Group, GDVTE Mr. Mehmet Yazar, Expert, GDVTE Ms. Kübra Karaibis, Assistant Expert, DVTE
23 September	Tue	Draft Terminal Evaluation Report circulated to MoNE and TIKA for review
24-September	Wed	Draft Terminal Evaluation Report Review Period (MoNE, TIKA, & JICA) 15:00 TİKA (Discussion on early responses) Ms. Ayşe ÖRÜN, Expert Ms. Berna GÜRKAŞ, Expert
25-September	Thu	AM: Comment reflection 14:30 JICA Evaluation Team Meeting
26-September	Fri	AM: Circulation of Confirmed Evaluation Report to MoNE, TIKA, JICA 14:30 Joint Coordination Meeting (JCC) Ankara (TK2175) → Istanbul (Evaluation Analysis)
27-September	Sat	01:05 Istanbul (TK052) → Narita (Evaluation Analysis)

Annex 2: List of Interviewees

1. Ministry of National Education (MoNE)

Name	Position	Roles in the Project
Mr. Osman Yıldırım	Acting Director General, GDVTE	Project Director
Ms. Şennur Çetin	Head of Department, GDVTE	Deputy Project Director
Mr. Mehmet Yazar	GDVTE	
Ms. Kübra Karaibis	Assistant Expert, GDVTE	

2. Turkish Cooperation and Coordination Agency (TIKA)

Name	Position	Roles in the Project
Dr. Mehmet Yılmaz	Head of Foreign Affairs and Partnerships Department	JCC Member
Ms. Ayşe ÖRÜN	Expert	
Ms. Berna GÜRKAŞ	Expert	

3. Department of Education, Izmir Province

Name	Position	Roles in the Project
Mr. Hasan KORKMAZ	Deputy Director	Former Project Manager (Till June 2014)

4. Mazhar Zorlu Technical and Industrial Vocational High School/Teacher Training Center

Name	Position	Roles in the Project
Mr. Yusuf VURAL	Acting Principal	Project Manager
Mr. Egemen DOGER	Head of IAT Department/Trainer	C/P
Mr. Gürcan Bildir	Coordinator/Trainer	C/P (Project Coordinator/IAT Trainer)
Mr. Murat ÖZDEVECİ	Ex-Chief of TTC/Trainer	C/P
Mr. Bülent VARDAL	Trainer	C/P
Mr. İsmail AKTAŞ	Trainer	C/P
Ms. Neslihan BILDIR	Project Assistant	Project Assistant

5. Japanese Expert

Name	Position
Dr. Takujiro Ito	Chief Advisor/Training Management/Curriculum Development 1

Annex 3: Inputs
Annex 3-1: Input by the Japanese Side

Annex 3-1-1 Assignment of Experts

Field of Expertise	Name	Dispatched period (M/M)				
		2012	2013	2014	2015	Total
Chief Advisor/Training Management/Curriculum Development 1	Takujiro ITO	5.33	3.20	3.63	1.34	13.50
Curriculum Development 2	Ayako NAKAZATO	3.00	2.00	2.00	0.00	7.00
Industrial Automation Technology	Hideki KUMAGAI	0.00	0.83	0.43	0.00	1.27
Coordinator/Training Management Assistance	Mami FUJISHIMA	3.00	2.16	1.60	0.00	6.76
Coordinator/Training Management Assistance (since September 17, 2014)	Gen FUJII				1.07	1.07
Total		11.33	8.19	7.66	2.41	29.6

Note: Covers the whole duration of the Project period based on the actual (up to August 2014) and estimate (September 2014 onwards).

Annex 3-1-2 Training in Japan: November 16-24, 2013

“Field Observation of Human Development for IAT in Japan,” 9-days trip to Japan for managers

from General Directorate of MoNE was implemented from November 16 to 24, 2013.

The main objectives of the field observation were as follows:

- 1) Obtain information regarding new trend of IAT related technologies in Japan
- 2) Observe the situation of the IAT education at TVE High Schools and Universities
- 3) Observe the standard facilities/service of the International Training Centers in Japan.

The names of the invited participants were as follows:

	Name	Title in Organization	Title in Project
1	Assoc. Prof. Dr. Ömer AÇIKGÖZ	Director General, General Directorate of Vocational and Technical Education (VTE)	Project Director (2012 and 2013).
2	Mr. Osman YILDIRIM	Group of Curricula and Teaching Materials, General Directorate of VTE	Project Director (since Jun 2014)
3	Mr. Yucel YUKSEL	Head of Department, General Directorate of VTE	Deputy Project Director

The itinerary included the following field visits and meetings:

	Name of Organization/ Lecture	Objective
1	Polytechnic University	To learn the overview of IAT education in higher education in Japan
2	Polytechnic Center	To learn about the roles and training contents of Polytechnic Center
3	Institute of National Colleges of Technology (KOSEN KIKOU)	Courtesy call
4	Tokyo National College of Technology (Tokyo KOSEN)	To learn about the roles and training contents of Tokyo KOSEN
5	Akashi National College of Technology (Akashi KOSEN)	To learn overview of the IAT education in vocational college in Japan
6	Tokyo Tech High School of Science and Technology	To learn overview of the IAT education in vocational high school in Japan
7	Factory of Denso, Denso E & TS Training Center Corporation	To see the automated industrial factory and learn about technical education in the company
8	Lecture of Japan Association for Automation Advancement	To learn the history and trend of IAT education in Japan
9	JICA Kansai	To learn the functions and services needed for International Training Center

Achievement of the training as per reported by the Project is as follows:

The three main objectives of the field observation were achieved through the visits to the IAT educational institutions, private factories, and through the lecture. The guests commented that they have learned about three major characteristics of the Japanese IAT education. One is the practical training on the automation field, second, the project based and problem-solving oriented studies, and third, the close relationship with the industry. These characteristics were not only focused in the high schools, colleges and universities; but they were emphasized in the human resource development in the private sector. One of the guests showed his surprise to the high placement rate in KOSEN and other organizations.

Annex 3-1-3 Provision of Equipment and Materials

1) Industrial Automation Composing System (2 sets)

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
1-1	Practice of Controlling Target Machine					
	Pneumatic Air Cylinder	Power (MAX): 15W, Rating torque: 120mNm, An output gear for connections: 80φmodule=1, Source Power: 220V/50Hz	MM-VA210	1,200	2	2,400
	Speed Control Induction Motor	Power (MAX): 15W, Rating torque: 120mNm, An output gear for connections: 80φmodule=1, Source Power: 220V/50Hz	MM-VA310	1,130	2	2,260
	Reversible Motor	Drive Source: Air pressure, Angle: 180°, An output gear for connections: 80φmodule=1	MM-VA320	930	2	1,860
	Rotary Pneumatic Air Actuator	Stroke 98mm or more, Output pin: φ6mm, An output gear for connections: 80φmodule=1	MM-VA410	1,405	3	4,215
	Feed Screw	Stroke: 135mm, Two table position detection sensors, Output pin: φ6mm	MM-VM140	2,240	2	4,480
	Slide Table	Conveyor effective length: 325mm, Belt width: 25mm, Rotatory direction: CW/CCW, An output gear for connections: 80φmodule=1	MM-VM310	1,700	2	3,400
	Belt Conveyor	Table dimensions: 160mm, Two sensors for table position detection, Rotatory direction: CW/CCQ, An output gear for connections: 80φmodule=1	MM-VM320	1,590	2	3,180
	Rotary Table	Drive Source: Air pressure, Pneumatic chunk, Stroke: 30mm, Top and bottom drive: The air pressure cylinder inside diameterφ15mm, Two sensor magnetism switches for top and bottom position sensing.	MM-VM330	2,250	2	4,500
	Pneumatic Air Driven Robot Arm	Tube: φ20mm (inside), Stroke: 75mm, Output pin: φ6mm	MM-VR110	1,880	2	3,760
1-2	Control and Supporting Units					
	2-Way Photo Electric Sensor	Transmission type Sensor dimensions: 34.8x18.6x10.8mm, Detection method: 10,000mm, Setting method: Strong magnet	MM-VS310	1,120	2	2,240

		base, Reflection type Sensor dimensions: 34.8x20x10.8mm, Detection method: Multi-reflection type Detection distance: 300mm, Setting method: Strong magnet base Source Power: 220V/50Hz				
	Connecting Rods	Shaft: Stainless steel, Highly precise ball joint, the tool for connecting units mechanically.	MM-VU310	200	2	400
					Sub-total	32,695

2) Industrial Automation Composing System (Mechanism & Application)

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
2-1	Typical Application Mechanism					
	Double Pin Geneva	Division number Geneva: 8, Geneva wheel: Wheel diameter (ϕ 110.1mm), Cam groove (10.1mm±5mm), Shaft position sensor input: One micro switch, Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=1	MM-VM220	2,400	1	2,400
	Spur Gear	Input-output speed ratio: 1:3 or 3:1, Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=1	MM-VM150	1,590	1	1,590
	Rack & Pinion	Motion conversion: Translatory movement ↔ Rotational movement, Output pin: ϕ 6mm, An output gear for connections: 80 ϕ module=1	MM-VA110	1,460	1	1,460
	Crank Arm	Motion conversion: Rotational movement ↔ Translatory reciprocating motion Reciprocating stroke: 34-86mm An output gear for connections: 80 ϕ module=1	MM-VM230	2,300	1	2,300
	Lever Slider	Motion conversion: Rotational movement ↔ Translatory reciprocating motion Reciprocating stroke: 89-124mm Composition detection sensor: Two micro switches AN output gear for connections: 80 ϕ module=1	MM-VM240	1,800	1	1,800
2-2	Control and Supporting Units					

	Work Slide Guide	Shoot for work piece	MM-FW270	300	2	600
	Work Piece	Color of the work: Red, Blue, Yellow, Quality of the material: Aluminum, with magnet on the back	MM-FW130	10	10	100
	Magnetic Fixture	Magnet jig for fixing the units, 5 pieces in one set	MM-VB410	400	3	1,200
					Sub-total	11,450

3) Control Equipment (PLC)

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
3-1	Interface and Wiring Equipment					
	Terminal I/O Box (for Omron)	Input: 8 points, Output: 8 points, An input and output connector: '36 Centronics pins. It is with GND/a dummy switch Source Power: 220V/50Hz	MM-VC300	1,200	2	2,400
	Wireless with Connection Pins	Pin part: A spring lock, Pin diameter: Large ϕ 4mm, Small ϕ 2mm, Cable length: 1.5m	MM-VC190	300	3	900
	Data switch	Connection to switch up to four devices at Centronics, Connector: 36 Centronics pins, Number of switching: 1:4 or 4:1	DTSV4-CT	60	3	180
	Centronics Cable	Cable to connect Terminal I/O Box and Data Switch, Cable length: 5m	KPU-005K	39	3	117
					Sub-total	3,597

4) Motor Experiment Unit

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
4-1	Motor Control Basic Experiment					
	Stepping Motor	Hybrid Motor Full Step/Micro Step with Terminal Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=15V Logic Voltage 24V Motor Voltage	MM-VA335	1,580	1	1,580
	DC Motor	DC Motor with Terminal Rotatory direction: CW/CCW, An output gear for connections: 80 ϕ module=15V Logic Voltage	MM-VA390	1,680	1	1,680

		24V Motor Voltage				
4-2	AC Servo Motor	Rating output: 0.1KW, Torque rating: 0.32N*m, Rotary speed: 3000r/min, An output gear for connections: 80φmodule=1, Source Power: 220V/50Hz	NM-VA345 OMRON	2,660	1	2,660
					Sub-total	5,920

5) Extra

	Equipment	Specifications	Ref. No	Unit Price (EUR)	Quantity	Amount (EUR)
5-1	Rotary Potentionmeter with BNC		MM-VC510	800	2	1,600
	Digital I/O Board USB Type		MM-VC310-USB	500	1	500
	Analog I/O Board with BNC		MM-VC590	600	1	600
					Sub-total	2,700

Total	56,362
KDV (18%)	10,145
Grand Total	66,507

Annex 3-1-4 Operational Expenses by Japanese Side

(TRY)

ITEMS	R/D	BUDGET (A)				ACTUAL (B)			
		AMOUNT				AMOUNT			
		2012	2013	2014 (up to Sep.)	TOTAL	2012	2013	2014 (up to Sep.)	TOTAL
I. INVITATION EXPENSES									
1. AIR FARE	○	94,280	0	0		119,762	0	0	
2. TRANSPORTATION	○	6,020	0	0		14,980	0	0	
3. PER DIEM	○	37,800	107,900	43,120		35,760	85,345	37,240	
4. ACCOMMODATION	○	186,740	334,400	96,410		181,475	224,710	73,158	
5. HEALTH INSURANCE	○	4,730	0	0		3,690	0	0	
SUB-TOTAL		329,570	442,300	139,530		355,667	310,055	110,398	
II. TRAINING EXPENSES									
1. TRANSLATION EXPENSES		0	373,025	82,340		0	159,630	65,134	
2. EXCURSION EXPENSES		0	0	0		0	0	0	
3. EXPENDABLE SUPPLIES		0	0	0		0	0	0	
4. CONSUMPTION MATERIAL		0	0	0		0	0	0	
5. MEETING EXPENSES		0	0	0		0	0	0	
6. PRINTING		0	0	0		0	0	0	
7. OTHERS		0	0	0		2,644	0	0	
SUB-TOTAL		0	373,025	82,340		2,644	159,630	65,134	
TOTAL		329,570	815,325	221,870	1,366,765	358,311	469,686	175,532	1,003,529

Annex 3-2: Input by the Turkish Side

Annex 3-2-1 Assignment of C/Ps

ID	Name	Affiliation	Project Function	2012年			2013年				2014年			
				Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Prof. (Mr.) Ömer AÇIKGÖZ	MoNE	Project Director											
2	Mr. Osman YILDIRIM	MoNE	Project Director											
3	Ms. Şennur ÇETİN	MoNE	Deputy Project Director											
4	Mr. Yücel YÜKSEL	MoNE	Deputy Project Director											
5	Mr. Yaşar Baki ALTUNBAŞ	MoNE	Deputy Project Director											
6	Mr. Mehmet YAZAR	MoNE	Deputy Project Director											
7	Mr. Hamit DOĞAN	MZS	Project Manager											
8	Mr. Hasan KORKMAZ	MZS	Project Manager											
9	Mr. Yusuf VURAL	MZS	Project Manager											
10	Mr. Murat ÖZDEVECİ	MZS	CP											
11	Mr. Osman Egemen DÖĞER	MZS	CP											
12	Mr. Gürcan BILDIR	MZS	CP											
13	Mr. Bülent VARDAL	MZS	CP											
14	Mr. İsmail AKTAŞ	MZS	CP											
15	Mr. Mustafa NAZMAN	MZS	CP											
16	Mr. Telat GÜLER	MZS	CP											

Annex 3-2-2 Assignment of TIKA Representatives

ID	Name	Project Function	2012年			2013年				2014年				
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	Dr. Mehmet YILMAZ	JCC Member												
2	Ms. Ayşe ORUN	Expert												
3	Mr. Şafak ÖZDEMİR	Expert												
4	Mr. Ömer ÖZDENÖREN	Expert												
5	Ms. Belgin ÇAĞDAŞ	Expert												
6	Mr. Ahmet DAŞTAN	Expert												
7	Ms. Berna GÜRKAŞ	Expert												

Annex 3-2-3 Provision of Equipment and Materials

Expenses for TTC	Amount (TRY)
Computer Laboratory	50,000
Furnishing for devices (Motor Control Lab.)	25,000
CNC Control Equipment	5,000
Expenses for TTC rooms	35,000
Laptop computer	5,000
XYZ Table	10,000
Expenses for conference hall	70,000
TOTAL	200,000

Expenses for TIK A	Amount (TRY)
Body Feeding with Sensor and Faulty Party Evacuation	11,562
Elektropneumatic	6,040
Horizontal piece distribution system with external gripper	16,490
Rotating manipulator and gripper	22,285
Two-axis Cartesian manipulator and holder	22,293
Others	6,962.50
SUBTOTAL	85,632.5
18% VAT	15,413.85
TOTAL	101,046.35

Annex 3-2-4 Operational Expenses by Turkish Side

(TRY)

ITEMS	R/D	BUDGET (A)				ACTUAL (B)			
		AMOUNT				AMOUNT			
		2012	2013	2014 (up to Sep.)	TOTAL	2012	2013	2014 (up to Sep.)	TOTAL
I INVITATION EXPENSES									
1. AIR FARE		0	233,950	93,840		0	130,260	72,370	
2. TRANSPORTATION		0	24,360	12,800		0	20,080	15,880	
3. PER DIEM		0	0	0		0	0	0	
4. ACCOMMODATION		0	0	0		0	0	0	
5. HEALTH INSURANCE		0	5,800	7,500		0	11,050	4,320	
SUB-TOTAL		0	264,110	114,140		0	161,390	92,570	
II TRAINING EXPENSES									
1. TRANSLATION EXPENSES	TIKA	132,740	0	0		78,500	0	0	
2. EXCURSION EXPENSES	TIKA	30,328	33,200	27,500		51,980	51,086	36,150	
3. EXPENDABLE SUPPLIES	TIKA	2,240	15,000	6,000		4,860	15,000	3,000	
4. CONSUMPTION MATERIAL	TIKA	51,000	100,000	45,000		51,000	99,500	0	
5. MEETING EXPENSES	MoNE	18,000	40,000	17,000		12,000	40,000	18,000	
6. PRINTING	MoNE	2,400	50,000	2,000		600	50,000	1,450	
7. OTHERS	MoNE	2,000	21,600	9,000		31,500	21,600	9,350	
SUB-TOTAL		238,708	259,800	106,500		230,440	277,186	67,950	
TOTAL		238,708	523,910	220,640	983,258	230,440	438,576	160,520	829,536

Annex 4: Evaluation Grid (Results of the Evaluation)

Evaluation Questions		Results
Main Questions	Sub Questions	
Prospect for Achieving the Overall Goal	<p>To what degree has the Overall Goal been achieved?</p> <p>Overall Goal: Technical education and vocational training capacity on IAT of target countries is enhanced.</p>	<p>OVI: Trial IAT program(s) is/are introduced to the participant's institution.</p> <ul style="list-style-type: none"> The achievement of the indicator will require resource input (financial, technical, and logistical), either by own effort of the participating countries' Ministry of Education or through support by external sources. One emerging case is Kazakhstan, where additional/separate larger context input (e.g. Japanese Government resource for supporting small/medium sized business acquired in Kazakhstan channeled to the pilot institutions of this Project, World Bank assistance to educational institutes in Kazakhstan included the pilot colleges, etc.) has been secured to produce emerging results: At three out of the four pilot institutions, IAT course has started, with equipment purchase arrangement in process. Large part of accessing such further support has been arranged by the Project, reaching out to Kazakhstan as a part of Project activities. This kind of additional handholding required for meeting the Overall Goal will not be available to the other participating countries at post-completion stage of the Project period, and therefore, the prospect for achieving the Overall Goal (which is by default a goal for the implementing agency to achieve AFTER the Project period) is fair.
Prospect for Achieving the Project Purpose	<p>To what degree has the Project Purpose been achieved?</p> <p>Project Purpose: Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.</p>	<p>A. Kazakhstan:</p> <p>OVI 1: TVE administrators are aware of what and how to introduce IAT program into the TVE.</p> <ul style="list-style-type: none"> Achieved: 9 Administrators attended CFT Executive Managers Course and the TVE Managers Course, both in Nov. 2012, and based on the knowledge obtained, TVE Managers developed action plans to introduce the IAT program to their schools. The proposals were submitted to the Ministry of Education and Science in Kazakhstan. (p. 3, 2nd PR). <p>OVI 2: At least 4 TVE colleges are selected as IAT Pilot College.</p> <ul style="list-style-type: none"> Achieved: Kazakhstan's Ministry of Education and Science selected 4 TVE colleges as IAT pilot colleges (Almaty State Polytechnic College, Almaty State College of Energetic and Electronic Technologies, Taldykorgan College of Manufacturing Industry, and Zyambyl Polytechnic College) (p. 3, 2nd PR). <p>OVI 3: At least 3 teachers from each pilot college become capable of teaching basic and intermediate IAT course as team.</p> <ul style="list-style-type: none"> Achieved: In June 2013, three teachers each from the 4 pilot colleges attended IAT Basic Course and successfully completed the program. By the time of the Intermediate Course (June 2014), two of them (one each from Almaty State Polytechnic College and Taldykorgan College of Manufacturing Industry) had been transferred to other positions. Their slots were given to the other technical staff from the respective institutions with a condition that they will catch up by attending the Basic Course offered by Nazarbayev University prior to travelling to Turkey for the Intermediate Course at TTC. The condition was met and led to the achievement of this indicator. <p>OVI 4: Basic IAT course program(s) is/are developed based on the training at TTC.</p> <ul style="list-style-type: none"> Prospect for achieving the indicator is high as per the status at the time of Terminal Evaluation (Sep. 2014). At three out of four Project participating institutions (i.e. Almaty State College of Energetic and Electronic Technologies, Taldykorgan College of Manufacturing Industry, and Zyambyl Polytechnic College), approval for the course offering has been obtained from the Ministry of Education, followed by the development of the course program, and based on which the course implementation has started. Including Almaty State Polytechnic College whose course application is at the Ministry of Education and Science review stage, IAT equipment procurement application is also at the Ministry of Education and Science for review for

Evaluation Questions		Results
Main Questions	Sub Questions	
		<p>Almaty State College of Energetic and Electronic Technologies, Almaty State Polytechnic College, and Zyambyl Polytechnic College. Taldykorgan College of Manufacturing Industry has already secured budget for the equipment, and it is now being procured. While classes have started with the theoretical part to be covered in the 1st year, that will lead into lab work in the 2nd year by which time equipment procurement is hoped to complete, textbook/material preparation have not caught up, and is understood as an area for the Turkish C/Ps to assist as short term experts with expected dispatch in April 2015.</p> <p>B. Pakistan:</p> <p>OVI 1: TVE administrators are aware of what and how to introduce IAT program in their schools.</p> <ul style="list-style-type: none"> Achieved: Agreement of Memorandum was signed by the Project Needs Survey Mission Team and Mr. Qamar Zaman Ch., Secretary, Ministry of Professional Technical Training, Government of Pakistan. In addition, 2 high ranking administrators attended the CFT Executive Managers Course that was conducted in Nov. 2012. The participants agreed that they will select appropriate TVE teachers for the CFT training in TTC, and the 1st course, IAT Basic, was successfully implemented in Dec. 2012. <p>OVI 2: At least 3 or more institutions are selected for the participation to training in TTC.</p> <ul style="list-style-type: none"> Achieved: Following 7 institutions were selected to send teachers to the Basic IAT Course (2012) and the Intermediate IAT Course (2013) – National Training Bureau (NTB), Islamabad; Technical Training Center, Quetta, Baluchistan; Govt Vocational Training Institute, Mirpur, Azad Kashmir; Govt College of Technology, Rawalakot, Azad Kashmir; GVT Peshawar, Peshawar; STEVTA, Sindh; GCT Tangi, Charsadda, North West Frontier Province. <p>OVI 3: 10 teachers are trained in Basic, Intermediate and Advance IAT course at TTC.</p> <ul style="list-style-type: none"> Prospect for achievement of this indicator is high. During the Needs Survey before the start of the course, Pakistani Government agreed to send the same participants from the same institutions to be trained in Turkey in the course of the 3 year of the Project. Subsequently, Pakistani teachers participated in the Basic IAT Course on 3-21 Dec., 2012. In 2013, the same participants attended the Intermediate IAT Course on 4-22, Nov., 2013. The Advanced Course is scheduled for 5-23, Jan., 2015, and the same participants are expected to return to the Course. <p>C. Azerbaijan:</p> <p>OVI 1: TVE administrators are aware of what and how to introduce IAT program in their schools.</p> <ul style="list-style-type: none"> Achieved: Eight administrators from Azerbaijan attended the CFT Executive Managers Course and the TVE Managers Course in Nov. 2012. Based on the knowledge from the training, TVE Managers developed action plans to introduce the IAT program to their schools. The proposals were submitted to Azerbaijan's Ministry of Education, (<i>Note: however, no further information on the progress of the action plans.</i>) <p>OVI 2: At least one institution is selected as IAT pilot college.</p> <ul style="list-style-type: none"> Prospect for achieving the indicator is low: During the June 2012 Needs Survey, Azerbaijan's Vocational Training Office DG mentioned the possibility of establishing an IAT pilot college. Yet 2013 Sep Basic IAT course participants were drawn from several TVE colleges, and none came from IAT pilot college. As of Sep 2014, no further confirmation is obtained through TIKA who had been requested to check in through its in-country liaison the update status at Azerbaijan's Ministry of Education.

Evaluation Questions		Results
Main Questions	Sub Questions	
		<p>OVI 3: 20 teachers are trained in Basic IAT course at TTC.</p> <ul style="list-style-type: none"> Prospect for achieving this indicator is high: In 2013, 10 teachers participated in the training at TTC. Participation of another set of 10 teachers in Oct 2014 Basic Course is probable, which will suffice the achievement of the indicator. However, the appropriateness of selection has been questioned. It is due to the professional background of the dispatched teachers who all have computer science background. It seems inevitable as the country does not have institutions related to IAT, from which to send the instructor participants. <p>D. Group Training target countries</p> <p>OVI 1: TVE administrators are aware of the importance of the IAT.</p> <ul style="list-style-type: none"> Achievement level of the indicator is medium. Eight administrators attended the GT TVE Managers Course in Nov. 2012: 2 from Kyrgyzstan, 2 from Tajikistan, 0 from Turkmenistan, 2 from Afghanistan, and 2 from Palestine. Subsequently, a total of 18 TVE trainers attended the IAT Basic Courses – from Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, and Palestine (Plan was 24). However, no TVE trainers from Afghanistan as the applicants did not possess relevant background and did not meet the candidacy. Follow up with Afghanistan had been agreed through TIKA. However, to date, no specific further action has been discussed, and at this stage Afghanistan participation has faded out for the Project. <p>OVI 2: At least 10 teachers from each country are trained in basic IAT course.</p> <ul style="list-style-type: none"> Prospect for achieving the indicator is fair, based on the preparation status of Nov. 2014 and Dec. 2014 Basic Courses and continued uncertainty of appropriate participation from Afghanistan.
Achievement levels of the Outputs	<p>To what degree has Output 1 been achieved?</p> <p>Output 1: Training for target group is appropriately planned.</p>	<p>1-1 Appropriate training targets are set for each country focused training country.</p> <p><u>Means of Verification:</u> Agreement document prepared with each country during the Need Survey (as per PDM)</p> <ul style="list-style-type: none"> ✓ Achieved by Terminal Evaluation. 2012 June Needs Survey for CFT target countries- Pakistan, Kazakhstan, and Azerbaijan- led to the production of the country specific three year program which were discussed with their own governments. The agreement document on IAT training at TTC was only signed in Pakistan, however, the results of the Needs Survey were submitted to, and received by, the Ministry of Education and Science in Kazakhstan and the Ministry of Education in Azerbaijan. The Needs Survey for Uzbekistan was canceled, but an agreement was reached to invite technical teachers from Uzbekistan to GT. The training targets for Azerbaijan were revised at the 5th JCC in Nov. 2013 to conduct two IAT Basic Course for different participants (in lieu of IAT Basic and Intermediate Courses to the same participants) to align with the scope of commitment of Azerbaijan's Ministry of Education. <p>1-2 Appropriate training targets are set for group training.</p> <p><u>Means of Verification:</u> Project progress reports (as per PDM)</p> <ul style="list-style-type: none"> ✓ Achieved by Terminal Evaluation: Four GT TVE managers from the target countries were invited to the 1st GT course in Nov. 2012. Through the training, the needs of the contents that would be taught in the subsequent courses were identified along with possible goals, and the contents were developed. <p>1-3 Appropriate training plans are prepared for country-focused training program.</p>

Evaluation Questions		Results
Main Questions	Sub Questions	
		<p><u>Means of Verification:</u> Project progress reports (as per PDM)</p> <p>✓ Achieved by Terminal Evaluation: During June 2012 Needs Survey, training plans for Azerbaijan, Kazakhstan, and Pakistan were expanded, and the survey team reached agreements with local representatives from the Ministry of Education.</p> <p>1-4 Appropriate training plans are prepared for group training program.</p> <p><u>Means of Verification:</u> Project progress reports (as per PDM)</p> <p>✓ Achieved by Terminal Evaluation: Based on the targets developed for GT in 2012, training plans and a course schedule for the IAT Basic Course were developed.</p>
Achievement levels of the Outputs	<p>To what degree has Output 2 been achieved?</p> <p>Output 2: Training for target group is effectively provided.</p>	<p>OVI 2-1. 70% of the course participants are satisfied in terms of course content, course management and accommodation services in GT courses and CFT courses.</p> <p><u>Means of Verification:</u> Results of the Course Questionnaire (as per PDM)</p> <p>✓ Prospect for achieving the indicator is high. Other than accommodation part of the evaluation, participants' satisfaction has been recorded meeting the indicator (e.g. as of March 2014, eight out of the total nine courses are evaluated as satisfactory by more than 80% of the participants in course content and course management), endorsing that the quality, relevance, and the delivery of the prepared courses surpassed the expectation of the participants. From Pakistan CFT IAT Intermediate Course, the evaluation on accommodation resulted in only 20% of the participants having been satisfied. This was due mainly to the transition period of TTC accommodation management from Mazhar Zorlu Technical and Industrial Vocation High School to Alsancak Nevvar Salih Isgoren Hotel Business and Tourism High school, when service quality was not yet stabilized. Over one year has passed since the handover during which time the Project continued to provide guidance and supervision to enhance service provision quality management as well as facility maintenance guidance. Current high occupancy rate suggests that the accommodation part of the survey that will be administered as a part of the remaining course evaluation will receive scores meeting this indicator.</p> <p>OVI 2-2. At least 80% of participants in country focused training achieve the 70 % of the learning performance.</p> <p><u>Means of Verification:</u> Results of the Course achievement tests (as per PDM)</p> <p>✓ Prospect for achieving the indicator is high. Four CFT for TVE Trainers were conducted before March 2014, among which only 1 was evaluated with the revised version of the Learning Performance Evaluation (ver. 3), since it was prepared after revision of this indicator. This Evaluation incorporated guidance by the JICA-dispatched lecturer on instructional design, and designed to capture incremental progresses and/or bottlenecks of the participants' daily learning through the end of day checking, ensuring that based on this data the IAT trainers can accommodate necessary adjustment to the learning of individual participants for the next day. Such a mechanism is expected to ensure close monitor of and support to the performance of the participants in the remaining two CFT and lead to the achievement of this indicator.</p> <p>OVI 2-3. At least 80% of participants in group training achieve the 70% of the learning performance.</p> <p><u>Means of Verification:</u> Results of the Course achievement tests (as per PDM)</p> <p>✓ Prospect for achieving the indicator is high. Two GT for TVE Trainers were conducted before March 2014, among which only one was evaluated with the</p>

Evaluation Questions		Results
Main Questions	Sub Questions	
		<p>revised version of the Learning Performance Evaluation (ver. 3), since it was prepared after revision of the indicator. The last two GT courses will be evaluated with the revised Learning Performance Evaluation and the result will be monitored for further conclusion. As stated already in reference to OVI2-2., this Evaluation incorporated guidance by the JICA-dispatched lecturer on instructional design, and is designed to capture incremental progresses and/or bottlenecks of the participants' daily leaning through the end of day checking, ensuring that based on this data the IAT trainers can accommodate necessary adjustment to the learning of individual participants for the next day. Such a mechanism is expected to ensure close monitor of and support to the performance of the participants in the remaining two GT and lead to the achievement of this indicator.</p>
Achievement levels of the Outputs	<p>To what degree has Output 3 been achieved?</p> <p>Output 3: Follow-up system is established.</p>	<p>OVI 3-1. Web-based information system is developed, installed and introduced during the training course.</p> <p>Means of Verification: Project progress reports (as per PDM)</p> <p>✓ Considered achieved by Terminal Evaluation: The developed web-based training support system -WBTSS- has been introduced during the training to all the target participants to date, and the same arrangement is planned for the rest of the Course offering. However, except for Pakistan, this platform has barely been used due probably to the lack of language interface (for non-English based countries), access to as well as familiarity with the internet, etc.</p> <p>OVI 3-2. Training impact is properly assessed in second and third year in CFT countries, identifying the degree of utilization, its affecting factors, and recommendation(s) for improvement.</p> <p>Means of Verification: Follow up survey report for CFT countries (as per PDM)</p> <p>✓ Prospect for achieving the indicator is modest. Monitoring Survey has been conducted for the three CFT courses in the follow-up period, and its collection rate is 68% (25 out of 37 participants). This rate includes 8 additional responses on the Basic Course filled and submitted when the Kazakhstan participants returned for the Intermediate Course. As this response suggests, it has been very difficult for the CPs to assume self-managed follow up activities. While TIKA has been put to coordinate as an interface between the Turkish side and the participating country side, the challenge of smooth and active follow up for results is expected to last.</p> <p>OVI 3-3. Training impact is properly assessed in second and third year in GT countries, identifying the degree of utilization, its affecting factors, and recommendations for improvement.</p> <p>Means of Verification: Follow up survey report for GT countries (as per PDM)</p> <p>✓ Prospect for achieving the indicator is modest. The collection rate of the already administered one GT survey was 55% (6 out of 11). In addition to the language and internet access barriers experienced with the CFT, the challenge for the GT comes from the arrangement that from the participant perspective it is one time commitment to attend the Basic Course, without a clear sense of benefit for continued association through the follow up. While the Project is planning to continue this monitoring, the challenge of post-training communication with the participants is expected to persist, and seeking proactive participation in this post-training needs to be clearly communicated while the participants are attending the course, giving them the value of such connection for their future resource for technical knowledge.</p>
Achievement of Inputs	Have the Japanese side's inputs been allocated as planned?	<ul style="list-style-type: none"> The planned input was disbursed. However, in light of the evolving situations not foreseen at the planning stage (e.g. departure of many CP from the preceding Project, that shrink the CP cohort down from around 25 personnel to seven at the Project start, which was further reduced to five due to staffing needs of the MZS), additional input was required for effective execution of the Project, either through JICA Turkey Office's separate budget line (for a short term expert on curriculum design) or with separate collaborative arrangement.

Evaluation Questions		Results
Main Questions	Sub Questions	
		<ul style="list-style-type: none"> • Personnel (Japanese the JICA Expert Team): The Japanese side has assigned five JICA Expert Team to the Project in the fields of: Chief Advisor/Training Management/Curriculum Development1, Curriculum Development 2, Industrial Automation Technology, and 2 Coordinators/Training Management Assistance that changed hands in the summer of 2014. (See Annex 3-1-1 Assignment of the JICA Expert Team). • Training in Japan The Japanese side has provided training in Japan to three managers from General Directorate of MoNE for field observation (Nov. 16-24, 2013) with the following objectives: (1) Obtain information regarding new trend of IAT related technologies in Japan, (2) Observe the situation of the IAT education at TVE High Schools and Universities, (3) Observe the standard facilities and service of the International Training Centers in Japan. (See Annex 3-1-3 Training in Japan and the Third Country). • Provision of equipment and materials: The Japanese side has provided equipment necessary for the implementation of the Project (industrial automation composing system, industrial automation composing system- mechanism & application, control equipment-PLC, motor experiment unit), which amounted to EUR 66,507 (Approximately JPY 9.1 million) (See Annex 3-1-4 Provision of Machinery and Equipment). • Operational Expenses: The Japanese side has allocated total amount of TRY 1 million (Approximately JPY 48.2 million) for the operational costs of project activities with a focus on expenses for training participants (See Annex 3-1-4 Operational Expenses by Japanese side).
	Have the Turkish side's inputs been allocated as planned?	<ul style="list-style-type: none"> • Turkish side also made the effort in securing resources to support the Project activities. The most challenging part of the resource acquisition related to the CP assignment. Manpower needs to meet the planned activities at TTC was calculated at 77.7MM/year. Yet, five CP had to shoulder this load, each heroically performing more than one person's full time job. • Counterpart personnel: The Turkish side has assigned one Project Director, one Project Manager, five to seven C/P (at a time) drawn from TTC (See Annex 3-2-1 Assignment of C/P Personnel). • Facilities: The Turkish side has provided office space for JICA Expert Team. • Local cost: The Turkish side has allocated the total amount of TRY529, 536 (approximately JPY 6.2 million) for the operational costs of project activities with a focus on training expenses (shared between MoNE and TIKA) (See Annex 3-2-2 Turkish Side's Local Costs).

SECTION II. Implementation Process

Evaluation Questions		Results
Main Questions	Sub Questions	
Implementation of Activities and Ownership in Implementation	To what degree have project activities been implemented as planned? Has the implementation agency (i.e. MoNE) demonstrated an adequate level of ownership to enhance their management capacity?	<ul style="list-style-type: none"> At TTC, the IAT trainers, who not only possess distinguished technical expertise but also high moral and commitment in their professional service delivery aided by never ending pursuit for betterment, strived to give their best in preparing the training program, delivering the courses, and following up for improvement for Project execution. What is beyond their domain of business that was essential for their effort to bring results, is the communication with the participants beyond national borders where internet access might be more limited (not only as physical access but inclusive of cultural or habitual barriers that might exist) and/or language prohibits direct communication, part of Project work discussed and agreed at JCC to be handled by TIKA. It turned out that the effective implementation of the planned activities require more handholding and reaching out than simple communication by sending out forms and collecting them. While it is clear that all the concerned parties have done their part within the scope of their mandate, glitches (e.g. no-responses to follow-up survey) hindered the smooth and effective implementation of the Project activities.
Project management	Are there any issues with the project management? Has there been an effective communication and information sharing among CP and between CP and Experts?	<ul style="list-style-type: none"> The Project structure as per signed in the RD November 28, 2011) assumed international coordination part of the Project work is administered by "TIKA Target Country Office Staff" (p.9) with "JICA Target Country Staff" providing "Coordinative Support," meaning these personnel are internalized as actors in the Project

SECTION III: Evaluation by the Five Criteria

	Evaluation Questions		Results
	Main Questions	Sub Questions	
Relevance	Relevance with the Government policy of Turkey	<p>Has the Project been in line with the priority of development policies of the Government of Turkey as well as vision, principles, and strategic plan of MoNE?</p> <p>Are they also in line with the development agendas of the participating countries?</p>	<ul style="list-style-type: none"> • Match with the national policies of Turkey, particularly that pertaining to their own international cooperation to the neighboring countries was mentioned during appraisal, and is sustained through the succeeding development plan (i.e. 10th Development Plan). • Well aligned with Turkey's support in education, incl. IAT support to Azerbaijan. As per Appraisal Report (p. 20), TTC's long term strategy includes its support as IAT capacity development training center for the neighboring countries. • 10th Development Plan (2014-2019)" also emphasizes international cooperation for development axis by sharing experiences with other countries. • The government's legislative document emphasizes pursuing national and international projects in TVET domain, endorsing that the Project is a well aligned realization of the direction of the sub-sector.
	Relevance with the needs of beneficiaries	<p>Has the Project Purpose been in line with the needs of the target group? Have the needs of the target group been high?</p> <p>Target Group: Teachers teaching IAT and related subjects in technical and vocational schools in target countries</p>	<ul style="list-style-type: none"> • As a part of Project formulation, JICA Turkey Office conducted needs survey and fleshed out specific and differentiated needs of the participating countries. Since this survey focused on the needs from the perspective of the industries, however, preparedness on the part of TVET institutions to initiate/upgrade IAT area were not identified to reflect into the Project design.
	Relevance with the Japan's ODA Policy	<p>Has the Project been in line with the Japanese Government's assistance policies for Turkey?</p>	<ul style="list-style-type: none"> • The Project is a precursor of Japan's ODA policy to Turkey, that emphasizes supporting Turkey's position as an emerging donor to the Central Asia and the Middle East. The MOU between JICA and Turkish Cooperation and Coordination Agency (TIKA) signed in January 2012 in order to promote the joint projects and technical cooperation projects is a testament and a proof of the Project's significance to Japan-Turkey partnership.
	Comparative empirical and technological advantage of Japan's cooperation	<p>Do you see Japan has clear technological and empirical advantages in IAT vocational training instruction for international participants?</p>	<ul style="list-style-type: none"> • Evidenced by the preceding, completed projects such as "Establishment of Industrial Automation Technologies Departments in Anatolian Technical High Schools (2001 to 2006)," "The Project on Strengthening the Program of Expanding Industrial Automation Technologies Department (SPREAD) (2007-2010)", technical expertise in the area of IAT vocational training instruction has been recognized as a critical area where concerned parties in Turkey can benefit from Japanese expertise. • This point was further confirmed during the November 2013 CP training in Japan where MoNE's senior managers were exposed to the Japanese current practices that emphasizes experimental, project based, problem-solving focused vocational education for the technical areas concerned. • Yet, the Japanese technological advantage has not yet been fully tapped: TTC trainers have highly valued Japanese equipment (e.g. OMRON) procured for their teaching activities, but there are far more Japanese equipment choice that will support Turkey's advancement in IAT education arena.
Effectiveness	Achievement of the Project Purpose	<p>What is the prospect of achieving the Project Purpose by the end of the Project period?</p>	<ul style="list-style-type: none"> • The prospect for meeting the determined per-country (for CFT) or per-group (for GT) indicators for the Project Purpose is mixed, with high potential for Kazakhstan and Pakistan, while low for Azerbaijan and medium for GT countries. Therefore, the overall prospect for achieving the Project Purpose is medium.

		Evaluation Questions		Results
		Main Questions	Sub Questions	
	<p>Purpose: Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.</p>	To what degree was the achievement of the Project Purpose attributable to the successful achievement of the Outputs?	<ul style="list-style-type: none"> For stronger achievers such as Kazakhstan and Pakistan, CFT for Executive Managers as well as that for TVE Managers under Output 1 served as critical opportunities to secure high level engagement of the participating countries' Ministry of Education. The criticality of additional factors to the Project Outputs for the achievement of the Project Purpose is clear from the Output 3: Without direct/effective interface between the IAT trainers and the participants, the prospect for achieving Output 3 is limited at most. 	
		Have the Important Assumptions for achieving the Project Purpose been fulfilled?	<ul style="list-style-type: none"> According to the hearing by the Project to the training participants, the important assumptions are largely met by the stronger achievers that are Kazakhstan and Pakistan: In Kazakhstan, three out of the four pilot colleges have already started the IAT course based on the TTC training results with associated equipment under procurement stage, and in Pakistan also, some of the institutions have started training on IAT. <p>Important Assumptions</p> <ul style="list-style-type: none"> Equipment are purchased by the participant institution. IAT Curriculum(s) is/are approved by the Ministry of Education of target countries. Teachers trained in Turkey are assigned to conduct the new curriculum at each target country. 	
	Contributing factors	To what degree has each Output been produced?	<ul style="list-style-type: none"> Output 1 is considered achieved. The achievement of Output 2 is deemed probable. The prospect for achieving Output 3 is limited. 	
		Have there been any other factors that contributed to the achievement of the Project Purpose?	<ul style="list-style-type: none"> Particularly for Kazakhstan, it is evident that the successful achievement of the Outputs coincided with parallel inputs and efforts that were drawn to the IAT pilot colleges from other sources, such as Japanese Government scheme for supporting small/medium sized business connected with the Project's IAT pilot colleges and World Bank assistance to educational institutes in Kazakhstan. 	
	Hindering factors to Effectiveness	Have there been any other factors that impeded the achievement of the Project Purpose?	<ul style="list-style-type: none"> Since application process for the training participants had to be conducted as logistical and administrative matter led by TIKA, it was difficult to enforce technical relevance in the selection, resulting in the recruitment of less than ideal candidates due to the target country conditions. 	
	Efficiency	Causality of Inputs and Outputs	Have Project activities been appropriately conducted in terms of their timing, duration, and quality to produce planned Outputs?	<ul style="list-style-type: none"> The training schedule was prepared in accordance with the Turkish calendar. Given participating countries might be dictated by different budget/academic calendars, a diagnostic analysis on the best timing could have increased the efficiency of Input-Output relationship.
Achievement of Outputs		Has the Important Assumption for achieving the Outputs been fulfilled?	<ul style="list-style-type: none"> Mostly. <p>Important Assumptions:</p> <ul style="list-style-type: none"> As results of the need survey in CFT target countries, local government agreed the target institution and content recommended by the survey team. A discussion for training content identification was implemented among the GT target countries. 	
Appropriateness of Inputs by Japan		How appropriate has the assignment of Experts been in	<ul style="list-style-type: none"> The planned input was disbursed. However, in light of the evolving situations not foreseen at the planning stage (e.g. departure of many CP from the preceding Project, that shrunk the CP cohort down from around 25 personnel to seven at the Project start, 	

	Evaluation Questions		Results
	Main Questions	Sub Questions	
		terms of the number of experts, their expertise and capabilities, and the dispatched periods and timings?	which was further reduced to five due to staffing needs of the MZS), additional input was required for effective execution of the Project. In this relation, a short term expert on curriculum design was arranged. This input was highly valued by both the Japanese and Turkish sides with a remark that it would have been even more effective if intervention was possible earlier in the course of the Project.
		How appropriate has CP training in Japan and in the third countries (if applicable) been in terms of the number of participants, training contents, and the dispatched period and its timing?	<ul style="list-style-type: none"> For training in Japan, "Field Observation of Human Development for IAT in Japan," 9-days trip for managers from General Directorate of MoNE was implemented from November 16 to 24, 2013. This exposure not only exposed to the MoNE managers Japanese IAT practices and teaching approach but also to how JICA operates its aid activities. The feedback shared endorses that the training impacted Project Director and other closely associated MoNE managers of the Project, and supported to forge more informed environment to the rest of the Project implementation.
		How appropriate has the provision of equipment by the Japanese side been in terms of its quality, quantity and timing?	<ul style="list-style-type: none"> TTC trainers have highly valued Japanese equipment (e.g. OMRON) procured for their teaching activities over the course of the last 10 years (from the predecessor project time). Initially no plan was made to procure Japanese equipment for this Project. However, due to advice of the short term expert, it was arranged and was reported to have drastically contributed to teaching, as the procured system could be dissembled and re-assembled, to enable more visual conceptualization of the IAT system.
	Appropriateness of Inputs by the Turkish side	How appropriate has the assignment of CP been in terms of the number, placement (i.e. balance between their regular tasks and Project activities) ownership and level of participation?	<ul style="list-style-type: none"> Turkish side also made the effort in securing resources to support the Project activities. The most challenging part of the resource acquisition related to the CP assignment. Manpower needs to meet the planned activities at TTC was calculated at 77.7MM/year. Yet, five CP had to shoulder this load, each heroically performing more than one person's full time job.
		How appropriate has the provision of facilities and equipment by the Turkish side been?	<ul style="list-style-type: none"> Turkish side also contributed to procure some equipment/supplies in the first and second years. Due to unforeseen circumstances, however, the third year applicable budget of TRY 50,000 (approximately JPY 2.4 million) has not been disbursed. MoNE and TTC are expecting to spend this allocated amount in the near future.
Efficiency		Has the budget for the Project been appropriate in scale?	<ul style="list-style-type: none"> See Section 1: Project Achievement
	Cooperation with other organizations/projects	Has there been any effective cooperation with other organizations or projects that increased the efficiency of the Project?	<ul style="list-style-type: none"> Partnership with the private sector, universities, and industrial park to be tapped.
	Contributing or hindering factors to Efficiency	Are there any other factors that increased or decreased the efficiency of the Project?	<ul style="list-style-type: none"> CP assignment Language/internet access barriers

	Evaluation Questions		Results
	Main Questions	Sub Questions	
Impact	Prospects of achieving the Overall Goals	To what degree has the Overall Goal been achieved? Overall Goal: Technical education and vocational training capacity on IAT of target countries is enhanced.	<ul style="list-style-type: none"> One emerging case is Kazakhstan, where additional/separate larger context input (e.g. Japanese Government resource for supporting small/medium sized business acquired in Kazakhstan channeled to the pilot institutions of this Project, World Bank assistance to educational institutes in Kazakhstan included the pilot colleges, etc.) has been secured to produce emerging results: At three out of the four pilot institutions, IAT course has started, with equipment purchase arrangement in process. Large part of accessing such further support has been arranged by the Project, reaching out to Kazakhstan as a part of Project activities.
		Will the Overall Goal be achieved in 3 to 5 years after the completion of the Project? (Are the Overall Goal and verifiable indicators still valid?)	<ul style="list-style-type: none"> The prospect for achieving the Overall Goal (which is by default a goal for the implementing agency to achieve by own effort AFTER the Project period) against the preset indicator is fair. <p>Means of Verification: Trial IAT program(s) is/are introduced to the participant's institution.</p>
		Have the Important Assumptions for achieving the Overall Goals been fulfilled?	<p>Important Assumption:</p> <ul style="list-style-type: none"> A decision was taken by the local government for the establishment of the IAT department.
	Other aspects	Are there any unexpected positive and negative impacts?	<ul style="list-style-type: none"> Cases of unexpected effects
Sustainability	Institutional aspect	Have roles and responsibilities of the responsible parties of the Project been clearly defined and understood among MoNE, TTC, TIKA?	<ul style="list-style-type: none"> Roles and responsibilities of the responsible parties of the Project were defined in R/D and understood among MoNE, TTC, TIKA. However, it is uncertain if the respective parties were fully aware of the complexities involved with managing international participants with whom they might not have full control for envisaged results [CP] Sustainability from the perspective of TTC teachers "transferring the knowledge to new people".
	Financial aspect	Have the Project concerned organizations been able to secure sufficient budget to conduct its operation and management based on the annual plans developed by the Project?	<ul style="list-style-type: none"> Most of the funding that was budgeted has been secured, at times.
	Technical aspect	Have core staff of the Project concerned organizations been trained sufficiently in number and knowledge to conduct its operation and management based on the annual plans developed by the Project?	<ul style="list-style-type: none"> Through the Project, the IAT trainers (i.e. C/P) strengthened coordinative/managerial/administrative capacity in planning, delivering, monitoring, and improving IAT training for trainers. It has proven through the Project that their expertise is of international value, which in turn is an important asset for Turkey as they can contribute to the capacity enhancement vision of the Turkish Government in strengthening global competitiveness in manufacturing industries. It is hoped that their expertise will be utilized for the country while maintaining exposure to the neighboring countries, so that findings will feed into further innovation to enable Turkey to hold its competitive edge.
	Other factors that will affect the sustainability of the Project achievements	Are there any other factors that will increase or decrease the sustainability of the Project?	<ul style="list-style-type: none"> During the Project period, exhaustive discussions were held regarding sustainability of TTC. As of now, its status as an attached service entity to MZS is anticipated to continue beyond the Project period. The needs for their service, either domestic for in-service training, or international, as an implementation arm to realize Turkish Government's national policy that emphasizes international cooperation, is anticipated to continue, and therefore, the sustenance of this entity should be a common agenda to be prioritized. Target country's bureaucratic procedures play important role in acquiring relevant applications and project execution.

Annex 5: Project Design Matrix (PDM) version 2

Project Title: The Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries		Duration: February 2012 – April 2015	
Implementing Agency: Ministry of National Education (MoNE)		Collaborating Agency: Turkish Cooperation and Coordination Agency (TIKA)	
Target Site: Teacher Training Center (TTC) of Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School			
Target Countries: 1) Country Focused Training: Azerbaijan, Kazakhstan, Pakistan and 2) Group Training: Uzbekistan, Afghanistan, Kyrgyzstan, Palestine, Tajikistan and Turkmenistan			
Target Group: Teachers teaching IAT and related subjects in technical and vocational schools in target countries			
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Super Goal IAT human resources are developed in target countries.	IAT department is established in at least in one of the participant's institution.	Follow up survey report	
Overall Goal Technical education and vocational training capacity on IAT of target countries is enhanced.	Trial IAT program(s) is/are introduced to the participant's institution.	Follow up survey report	<ul style="list-style-type: none"> • A decision was taken by the local government for the establishment of the IAT department.
Project Purpose Technical education and vocational training capacity of teachers in IAT in target countries is enhanced.	<p>A. Kazakhstan:</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of what and how to introduce IAT program into the TVE. 2. At least 4 TVE colleges are selected as IAT Pilot College. 3. At least 3 teachers from each pilot college become capable of teaching basic and intermediate IAT course as team. 4. Basic IAT course program(s) is/are developed based on the training at TTC. <p>B. Pakistan:</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of what and how to introduce IAT program in their schools. 2. At least 3 or more institutions are selected for the participation to training in TTC. 3. 10 teachers are trained in Basic, Intermediate and Advance IAT course at TTC. <p>C. Azerbaijan:</p> <ol style="list-style-type: none"> 1. TVE administrators are aware of what and how to 	<p>A. Kazakhstan:</p> <ol style="list-style-type: none"> 1. Course implementation reports 2. Need survey report, project progress report 3. Course implementation reports 4. Impact survey report <p>B. Pakistan:</p> <ol style="list-style-type: none"> 1. Course implementation report, Impact survey report 2. Course implementation report, Project progress report 3. Course implementation report <p>C. Azerbaijan:</p> <ol style="list-style-type: none"> 1. Course Implementation report, 	<ul style="list-style-type: none"> • Equipment are purchased by the participant institution. • IAT Curriculum(s) is/are approved by the Ministry of Education of target countries. • Teachers trained in Turkey are assigned to conduct the new curriculum at each target country.

	<p>introduce IAT program in their schools.</p> <p>2. At least one institution is selected as IAT pilot college.</p> <p>3. 20 teachers are trained in Basic IAT course at TTC.</p> <p>D. Group Training target countries</p> <p>1. TVE administrators are aware of the importance of the IAT.</p> <p>2. At least 10 teachers from each country are trained in basic IAT course.</p>	<p>impact survey report</p> <p>2. Project progress report</p> <p>3. Course implementation report</p> <p>D. Group Training target countries</p> <p>1. Course implementation report</p> <p>2. Course implementation report</p>	
<p>Output:</p> <p>1. Training for target group is appropriately planned.</p> <p>2. Training for target group is effectively provided.</p> <p>3. Follow-up system is established.</p>	<p>1-1 Appropriate training targets are set for each country focused training country.</p> <p>1-2 Appropriate training targets are set for group training.</p> <p>1-3 Appropriate training plans are prepared for country-focused training program.</p> <p>1-4 Appropriate training plans are prepared for group training program.</p> <p>2-1 70% of the course participants are satisfied in terms of course content, course management and Accommodation services in GT courses and CFT courses.</p> <p>2-2 At least 80% of participants in country focused training achieve the 70 % of the learning performance.</p> <p>2-3 At least 80% of participants in group training achieve the 70% of the learning performance.</p> <p>3-1 Web-based information system is developed, installed and introduced during the training course.</p> <p>3-2 Training impact is properly assessed in second and third year in CFT countries, identifying the degree of utilization, its affecting factors, and recommendation(s) for improvement.</p> <p>3-3 Training impact is properly assessed in second and third year in GT countries, identifying the degree of utilization, its affecting factors, and recommendations for improvement.</p>	<p>1-1 Agreement document prepared with each country during the Need Survey</p> <p>1-2 Project progress reports</p> <p>1-3 Project progress reports</p> <p>1-4 Project progress reports</p> <p>2-1 Results of the Course Questionnaire</p> <p>2-2 Results of the Course achievement tests</p> <p>2-3 Results of the Course achievement tests</p> <p>3-1 Project progress reports</p> <p>3-2 Follow up survey report for CFT countries</p> <p>3-3 Follow up survey report for GT countries</p>	<ul style="list-style-type: none"> • As results of the need survey in CFT target countries, local government agreed the target institution and content recommended by the survey team. • A discussion for training content identification was implemented among the GT target countries.

Activities	Inputs		
<p>1-1 Identify detailed training needs of each country.</p> <p>1-2 Select target institution(s) in each country.</p> <p>1-3 Establish specific project targets for each country.</p> <p>1-4 Develop/ improve training curriculum.</p> <p>1-5 Prepare/ improve training material.</p> <p>1-6 Determine training schedule.</p> <p>2-1 Select participants.</p> <p>2-2 Arrange logistics.</p> <p>2-3 Implement training.</p> <p>2-4 Evaluate training.</p> <p>3-1 Develop follow-up plan.</p> <p>3-2 Develop web-based information system.</p> <p>3-3 Conduct follow-up of the CFT and GT participants through web-based information system as well as through the TIKa foreign offices.</p> <p>3-4 Evaluate the impact of the training based on the collected information.</p>	<p>[Turkish Side]</p> <p>1) Personnel</p> <ul style="list-style-type: none"> - Project Director (Director General, General Directorate of Technical and Vocational Education) - Deputy Project Director (Head of Department, General Directorate of Technical and Vocational Education) <ul style="list-style-type: none"> • Project Manager (Principal, Izmir Mazhar Zorlu Anatolian Technical and Industrial Vocational High School) - Project Coordinator (Teachers Training Center) - IAT Trainers (TTC) - Focal point person of TIKa <p>2) Facilities</p> <ul style="list-style-type: none"> - Office space for experts at TTC - Training facilities at TTC - ICT facilities including PC, Server, LAN and Internet. <p>3) Available data and information related to project</p> <p>4) Recurrent costs</p> <ul style="list-style-type: none"> - Supply of replacement of machinery, equipment, instruments, vehicles, tools, spare parts and other materials owned by Turkey side. - Utility and other basic expenses to run project. <p>5) Following training cost:</p> <ul style="list-style-type: none"> - Interpretation, Translation, Meeting expenses, Training material, Document printing, Excursion etc. <p>6) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Turkish side.</p>	<p>[Japanese Side]</p> <p>1) Experts</p> <ul style="list-style-type: none"> - Chief Advisor/ Training Management - Coordinator/ Curriculum Development - Other fields <p>2) Following training cost:</p> <ul style="list-style-type: none"> - Air fare, Transportation, Per-diem, Accommodation, Insurance etc. <p>3) Travel cost of joint needs survey mission to Azerbaijan, Kazakhstan, Pakistan and Uzbekistan for Japanese side.</p>	<ul style="list-style-type: none"> • Sufficient numbers of TTC counterparts are assigned to conduct the preparation, implementation and evaluation of the courses. • Necessary equipments and facilities are provided for the course implementation at TTC. • Sufficient PC and smooth internet connection is provided at TTC to each participant. • Necessary PC and internet connection is provided at participants institutions. <p>Pre-condition</p> <ul style="list-style-type: none"> • Target countries participate in project. • MoNE's decision to provide international training on IAT to the neighboring countries doesn't change.

**MINUTES OF MEETING
OF
THE SEVENTH JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES IN THE REPUBLIC OF TURKEY**

Agreed upon between


Ministry of National Education,

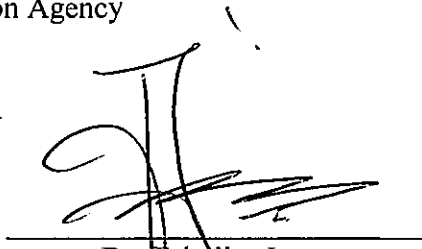
Turkish Cooperation and Coordination Agency

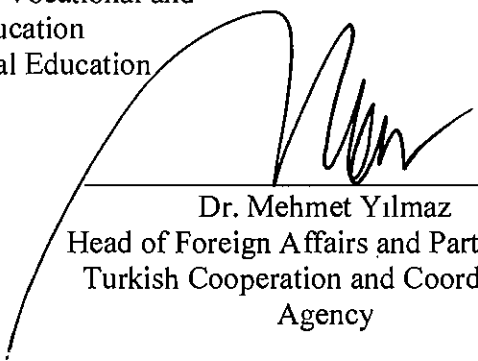
and

Japan International Cooperation Agency

Ankara
23rd December, 2014


Mr. Osman Yildirim
Acting General Director,
General Directorate of Vocational and
Technical Education
Ministry of National Education


Dr. Takujiro Ito
Chief Adviser
JICA Expert Team


Dr. Mehmet Yilmaz
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination
Agency

The Seventh Joint Coordinating Committee (hereinafter referred to as the “JCC”) Meeting on the Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey (hereinafter referred to as “the Project”) was held on December 23, 2014, at a Çankaya IMKB Hotel Business and Tourism Vocational High School, Çankaya, Ankara.

The representatives of Ministry of National Education (hereinafter referred as “MoNE), Turkish Cooperation and Coordination Agency (hereinafter referred as “TIKA”), Japan International Cooperation Agency (hereinafter referred as “JICA”), as well as Japanese Expert Team, Turkish staffs in Teacher Training Center (hereinafter referred as “TTC”) and Mr. Takahiro Yonemura, a First Secretary of Embassy of Japan in Turkey participated the meeting. (For details, refer to Annex 1.)

The result of discussions, which followed by the participants along the agenda (refer to Annex 2) have been summarized as follows.

1. Explanation of the Agenda

Agenda of the meeting was briefly explained by Ms. Şennur Çetin, Head of Group of MoNE.

2. Report of the Progress of the Activities and Schedule for the Remaining Period of the Project presented by Mr. Gürcan Bildır, Coordinator of the Project.

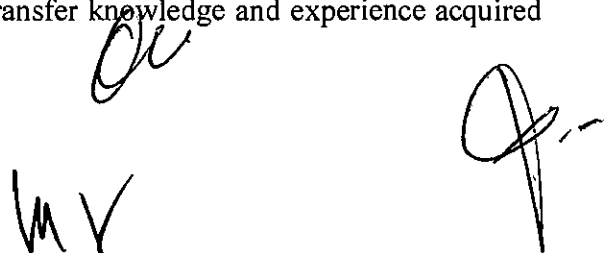
Mr. Gürcan Bildır, Coordinator of the Project, gave his presentation on the results of the progress of the Project activities since the extraordinary JCC held on 26 September 2014. His explanation on the Project activities consists of three aspects: Implementation of three IAT Courses (Azerbaijan Country Focused Training for Basics, Palestine Group Training for Basics, Pakistan Country Focused Training for Advanced); Participation to the International Advanced Industrial Automation Congress and Exhibition, organized by ENOSAD (Industrial Automation Industrialists Association) and held in Istanbul between 4 and 5 December 2014; Material development of a stepping and servo motor application and a position control application.

Firstly, for the implementation of the IAT Courses, Mr. Bildır concluded that Azerbaijan and Palestine IAT Basic courses were successfully terminated, while Pakistan Advanced IAT course should end on 26 December 2014 with its closing ceremony in Ankara.

Secondly, Mr. Bildır summarized the participation to the International Advanced Industrial Automation Congress and Exhibition attended by Mr. Murat Özdeveci and Mr. Bülent Vardal, TTC teachers together with Dr. Takujiro Ito and Mr. Gen Fujii of the Japanese expert team. The participation was perceived as success by the Project with the concrete result of acquiring knowledge concerning the latest issues on the industrial automation such as discussions on the Industry 4.0 through attending various panels held in the congress as well as of making contacts in the exhibition with the ENOSAD organisational committee for future collaboration and for opening a free booth for the 2nd Congress and Exhibition provisionally scheduled in 2016.

Thirdly, Mr. Bildır presented the development of a stepping and servo motor application and a position control application based on the equipment provided by TIKA.

Following the presentation on the activities progress, Mr. Bildır explained the future programme related to the Project, which was to transfer knowledge and experience acquired

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from the international training courses to Turkish ‘Technial Vocational Education’ (TVE) teachers in the field of Electricity/Electronics Technology, Machine Technology, Informaiton Technology and Industrial Automation Technology by providing In-Service Training programme in 2015.

3. Presentation and Discussion on the Idea of Future Cooperation Project

Following Mr. Bıldır’s presentation, Ms. Şennur Çetin invited Mr. Egemen Döğ̈er, Head of IAT Department in Mazhar Zorlu Vocational and Technical Anatolian High School (hereinafter referred as MZVTHS), for his presentation on the Idea of Future Cooperation Project.

Having explained the impact of TTC achievement in Turkish IAT education, Mr. Döğ̈er introduced a draft idea for a new project to be implemented between April 2016 and March 2017 (for details see Appendix 4). The project title was provisionally given as “Project for Strengthening the Quality of the TVE in Turkey”, while its objective to focus on the improvement of the quality of teaching-learning in Turkish TVE for six target subjects (Electrics/Electronics, Mechanics, IT, Construction, Air Conditioning and Refrigeration and Renewable Energy).

Mr. Döğ̈er suggested that three outputs are needed for the achievement of this objective; Output 1: The teaching skills of the trainers in the target subjects are strengthened; Output 2: The teaching materials of the target subjects are improved; Output 3: A model laboratory is established to conduct more effective practice.

In order to produce these three outputs, Mr. Döğ̈er stated three sets of activities (Activity 1 to 3) which are related to specific outputs should at least be carried out;

Activity 1 (related to Output 1) consists of;

- a) Identification of topics in need of strengthening within each subject;
- b) Guidance and planning in Turkey;
- c) Training of Trainers (ToT) Off-Job Training (Off-JT) in relevant institutions in Japan to improve teaching skills;
- d) ToT On-the-Job Training (OJT) in Turkey;
- e) Provision of trainings to all the TVE high school teachers.

Activity 2 (related to Output 2) consists of;

- a) Development of selected target modules;
- b) Development of experiment module set which includes: experiment guide, teaching aid, experiment kit and assessment tools;
- c) Validation and improvement of activity 1 and 2.

Activity 3 (related to Output 3) consists of

- a) Identification of the practical exercise;
- b) Selection of the equipment;
- c) Purchase and installation of the laboratory set;
- d) Elaboration of the operation manuals;
- e) Validation of the practical exercise and improvement of the laboratory configurations.

Mr. Döğ̈er then explained following inputs are needed for these sets of activities: Approximately two months of Off-JT in Japan to develop material per module, dispatch of a

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Japanese expert team consists of eight persons (one specialist from each of the six subjects plus, a chief advisor and a coordinator) to Turkey to support the development of the materials, formation of Turkish facilitator team consisting of twelve persons (two persons from each of the six subjects), provision of laboratory equipment for the target modules, workshop cost for the material development, training cost for the TVE teachers.

Having presented his idea, Mr. Döğ̈er reiterated that it was indeed a draft. Supposing that twelve teachers from six fields (total of seventy-two teachers) were to join the new project, he added, a number of issues would need to be addressed such as the ways of utilizing the acquired knowledge and skills from Japan in Turkey and of benefitting the experiences in Japan to reflect in the in-service training for other Turkish teachers.

After hearing Mr. Döğ̈er's presentation on a new project, Mr. Osman Yıldırım, the acting director of General Directorate of Vocational and Technical Education at MoNE, expressed his opinion on the draft proposal of the new project that six schools should be selected for the aforementioned six fields first and should develop with the same capacity as İzmir's Mazhar Zorlu school has to be training centers. He continued that, having defined the facility needs of laboratories and that of training for the teachers, selected teachers from these schools should be sent to Japan for the Off-the-Job trainings. Upon their return to Turkey, these teachers should be assigned to develop training materials of the relevant fields and start training other teachers in the pilot schools.

4. Presentation and Discussion on the Pre-Project

Whether a new project to be realised in accordance with Mr. Döğ̈er's draft idea, or if indeed there should be a new project or not, feasibility of a new project must be assess. With regards to this point, Mr. Döğ̈er further continued his presentation to suggest a draft idea for a pre-project. He suggested the period to conduct the pre-project as between April 2015 and March 2016 involving seventy-two teachers (6 teachers from each of 6 target fields for 2 groups) and including training in Japan, preparation of laboratory and experiment sets, training by Japanese experts in Turkey.

Ms. Şennur Çetin, the moderator of the JCC, invited opinions from JICA.

Mr. Masahiro Ueki, the Senior Representative of JICA Turkey Office, expressed his opinion that in JICA's time span, the submission deadline for new projects is set in August, meaning still eight months to go. Within this eight months, details of the new project proposal should be discussed. As for the feasibility study to be conducted by JICA, this also needs time for discussion. However, the extent of such a survey should stay within reason, and even from this point of view alone, the target fields and groups should be reduced. Above all, more discussion must take place.

Mr. Osman Yıldırım responded to Mr. Ueki's opinion by arguing that while agreeing the importance of further discussion, only details are left to be discussed as the objectives and outputs were clearly suggested for the new project, and thus the pre-project period should be executed by MoNE and JICA jointly as proposed above.

Adding to Mr. Yıldırım's point, Ms. Çetin reiterated the importance of the Japanese experts' presence since the preparation for the new project must be completed in a manner that JICA finds it satisfactory for which Japanese experts are professed with expertise. Further to this, Ms. Çetin commented that the details of the period should be decided by the Director General, Mr. Osman Yıldırım.

Dr. Mehmet Yılmaz of TIKA also stated his support for such a new project to be realized as for the benefit of Turkey and its people.

Following the responses carried by the Turkish side, Mr. Ueki of JICA stipulated the principle that no guarantee for the realization of the new project can be awarded in this JCC and one of the reasons to be for the fact that this was the first time that JICA had informed about the plan of the above-proposed new project.

By raising the point of a long and successful history of collaboration between JICA and MoNE since 1970s, Mr. Osman Yıldırım further wished such a collaboration to be continued in the field of education through a new project.

Dr. Takujiro Ito, JICA IATE Project Chief Adviser raised a point from the technical side about the requests of interest allegedly expressed by Kazakhstan and Pakistan over the continuation of support for the IATE course carried out in the Project. He informed the JCC members that he had a confirmation of interest from Ms. Bekzada, Director of TVE in Kazakhstan, albeit informally. According to Dr. Ito, Ms. Bekzada expressed interest to dispatch IAT teachers to participate in the IATE Advanced training course as they could only complete the basic and intermediate courses until the termination of the Project. Dr. Ito explained that Kazakhstan's motivation for such willingness is based on the fact that the country opened IAT department at their schools for the first time in September 2014 and these departments are in urgent need for securing quality in teaching skills and knowledge.

Further to this, these departments are now in official procedures of procuring equipment and thus they strongly request the dispatch of Turkish experts for the equipment instalment. He further pointed out that receiving such a strong commitment is a rare success in international trainings; hence Kazakhstan's effort should not be undermined.

After stating the Kazakhstan's interest in continuing the training to the advanced level and in receiving dispatch of Turkish experts, Dr. Ito continued to report on the interest from Pakistan that while National Training Bureau in Islamabad has their training programme to which the Project's training appreciated greatly, the target can now be shifted to the local bureaux by receiving trainees from each provincial vocational education centre for the IAT Basic course. Pointing out the fact that TIKA has now made a protocol with Pakistan over the vocational education, Dr. Ito suggested JCC members that it would not be too generous but rather reasonable to continue this cooperation little further so as to complete the Project's plan.

Responding to Dr. Ito's suggestion, Mr. Yıldırım pointed out that the schedule at TTC for 2015 has already been occupied by the national in-service training. Given that TIKA receives requests from these countries, the possibility to support their interests should not be negated and Turkish side should discuss alternatives such as dispatching Turkish experts to these countries.

Following Mr. Yıldırım's comment, Dr. Yılmaz of TIKA added that should TIKA receives official requests from these countries, the organization is able to prepare financial means to do so. However, the obstacle would be the use of training facilities as TIKA has no other choices than having to ask MoNE for the use of their institutions.

Ms. Çetin, then, invited any other comment and suggestion for the new project's idea or on-going Project.

Mr. Egemen Döğer informed the work plan starting from January 2015; the activities for the on-going Project including the report-writing to be completed in March 2015; then fifteen in-service courses are scheduled from May until the end of 2015 to train approximately 300 Turkish technical teachers by using the skills and knowledge acquired during the IATE

Project; if a new project is proposed by MoNE, engagement for the pre-project studies should be included until August 2015; other matters to be discussed further.

Mr. Ito raised a question over the TTC schedule for 2015 and 2016, by asking if additional four international courses can be incorporated into the schedule so that the domestic in-service training and international training can be conducted in parallel.

Stating the importance of the international trainings, Mr. Egemen Döger answered Dr. Ito's question that it is possible to incorporate some international trainings in TTC's framework. In addition, he, on behalf of all the TTC trainers, expressed that they should be grateful if domestic in-service training continues after 2015.

Based on Mr. Döger answer, Dr. Ito asked Mr. Yıldırım of MoNE for the possibility of incorporating the international trainings for Kazakhstan and Pakistan, should TIKA receives the official requests from these countries.

Mr. Yıldırım expressed importance of domestic in-service trainings as well as his intention to terminate the on-going Project as the ministry's intention is to start the preparation for the new project. As for the international trainings, assistance should be conducted in their own countries upon arrival of the official requests from these two countries.

With the awareness of interests from Kazakhstan and Pakistan (not official) albeit unofficial, Dr. Yılmaz of TIKA also stated his view that upon arrival of the official requests, TIKA will discuss with MoNE for the possibility of assistance such as schools to be trained and dispatch of Turkish experts to these countries. With regards to the scheduled termination of the on-going Project, he stressed that these requests should be addressed independently from the IATE Project's context.

5. Other Topics if Necessary, upon the proposition of JCC Members

Ms. Çetin addressed whether or not further points to be discussed.

Mr. Yıldırım remarked that a general framework for a new project was presented including MoNE's opinion, TIKA's opinion and JICA's opinion. Mr. Yıldırım once again reiterated his idea that the on-going Project cannot be continued forever and thus he agrees with TIKA about the requests from Kazakhstan and Pakistan to be assessed independently. With regards to the new project proposal, he further added that more discussions must take place both with the ministry and with JICA.

Ms. Miyuki Konnai of JICA raised a question about the framework of the proposed new project to Mr. Yıldırım by asking if the new project would bilateral cooperation between MoNE and JICA or some intervention by TIKA to make it trilateral cooperation.

Drawing an example from the earlier phases of the on-going Project, Mr. Yıldırım explained that this Project evolved from bilateral cooperation to trilateral one. For this, possibility still lies for the new project, should it be realized, to evolve trilateral cooperation.

Mr. Yusuf Vural, Principal of MZTVH, expressed his own opinion that TTC is always open to host trainings as the school's intention is to keep the sustainability of TTC.

Dr. Yılmaz of TIKA, then, expressed his opinion that TIKA collaborate with JICA in various ground and IATE Project is only one of the examples. Therefore, he wished further cooperation with JICA in different ground as well as in the education field.

Mr. Ueki of JICA, then, made three points. First point was the fact that Project extension was formally agreed and signed by the three parties, MoNE, TIKA and JICA, in the last JCC meeting back in September 2014. Nevertheless, this time's JCC change the direction to terminate the project for which he regrets. Second point was a question to find a suitable

budget for the feasibility studies during the period of preparation for the proposed new project. Third point related to the second was the difficulty to find a budget for the extended period without international training since the on-going Project is primarily about the international trainings. Mr. Ueki hinted that inclusion of international training program will negate the budget-finding obstacles.

Having shown his sympathy for Mr. Ueki's regrets, Mr. Yıldırım questioned about the decision made at the last JJC in September 2014. He argued that he did sign on the paper but it was to confirm the possibility of the Project's extension, not the extension per se. He also stated that if it was indeed about the confirmation of the extension, then the document must be verified and corrected. As for the financial perspective of the new Project preparation period, the budget should include the feasibility studies only.

Dr. Yılmaz of TİKA also supported Mr. Yıldırım's comment that they did not sign for the confirmation of the Project extension.

Mr. Yıldırım of MoNE suggested that another meeting should be held again to discuss the issues raised today.

Ms. Çetin of MoNE pointed out that closing of the last group training has been scheduled in January in Ankara and it would be a suitable opportunity to hold a meeting.

Mr. Ueki of JICA agreed to hold another meeting and commented that whether the January meeting to be called as JCC or not is not an issue but a frank discussion to be held between JICA, MoNE and TİKA.

Dr. Yılmaz of TİKA agreed to make a definite conclusion for the extension or the termination of the Project.

Mr. Yıldırım of MoNE responded that while no change in the ministerial idea is expected but to focus on the preparation of a new project, TİKA expressed no obstacles for allocating budget in case of the Project extension. No requirement for the formality such as JCC but informal meeting with JICA shall be enough to solve this matter. Making point about his idea, Mr. Yıldırım once again summarized that MoNE's intension is to terminate the Project on schedule, yet this should not refuse the idea to support international trainings independent from the Project's extension scope together with TİKA, should there be requests from countries of interest.

6. Closing Remarks

The closure of the meeting was announced by Ms. Çetin of MoNE, thanking all the participants in this JCC, reminding the closing ceremony of Pakistan Advanced course is scheduled on 26 December 2014 and the last traing course to begin on 05 January 2015 with possible meeting to be held between MoNE, TİKA and JICA on a suitable date in January 2015.



Appendix 1: Agenda of the Meeting



Industrial Automation Technology Extension Project for Central Asian and Middle East Countries

MoNE-TIKA-JICA Cooperation Project
Mazhar Zorlu Technical and Industry Vocational High School Teacher Training Center
Mevlana Mah. 1776 Sok. No: 2/2 Bornova - İZMİR TURKEY
Tel & Fax: +90 232 342 7043



Ministry of National Education
Republic of Turkey

The Seventh Joint Coordinating Committee Meeting

Date : December 23, 2014 (Tuesday)
Time : 14:00 – 16:00
Venue : Çankaya IMKB Hotel Business and Tourism Vocational High School, Çankaya, Ankara
Chair : Mr. Osman YILDIRIM, Acting Director General, General Directorate of VTE, MoNE
Moderator : Ms. Şennur ÇETİN

Agenda:

1. Explanation of the Agenda by Ms. Şennur ÇETİN (2 min.)
2. Report of the progress of the activities and schedule for remain period of the Project by Mr. Gürcan BILDIR (10 min.)
3. Presentation and discussion on idea of future cooperation project
 - (1) Presentation of the draft idea of new project by Mr. Egemen DÖĞER (15 min.)
 - (2) Discussion on the possibility of new project by the JCC members (30 min.)

Break (10 min.)
4. Presentation and discussion on pre-project
 - (1) Presentation of the draft plan for preparation of pre-project by Mr. Egemen DÖĞER (15 min.)
 - (2) Discussion on the possibility and its schedule by the JCC members (30 min.)
5. Other Topics if Necessary, upon the proposition of JCC members (5 min.)
6. Closing remarks by Mr. Osman YILDIRIM.

Appendix 2: Attendance List

Attendance List for 7th JCC Meeting

JCC Members, Turkish side

Dec. 23, 2014

No.	Name	Position	Affiliation
1	Mr. Osman YILDIRIM	Acting Director General	GD of Vocational and Technical Education, MoNE
2	Ms. Şennur ÇETİN	Head of Department	GD of Vocational and Technical Education, MoNE
3	Dr. Mehmet YILMAZ	Head of Foreign Affairs and Partnerships Department	Turkish Cooperation and Coordination Agency
4	Ms. Ayşe ÖRÜN	Expert	Turkish Cooperation and Coordination Agency
5	Ms. Berna GÜRKAŞ	Expert	Turkish Cooperation and Coordination Agency
6	Dr. Mehmet YAZAR	Expert	GD of Vocational and Technical Education, MoNE
7	Ms. Kübra KARAİBİS	Assistant Expert of MONE	GD of Vocational and Technical Education, MoNE
8	Mr. Yusuf VURAL	Principal	Mazhar Zorlu Technical and Industrial Vocational High School
9	Mr. Egemen DÖĞER	Head of IAT Department	Mazhar Zorlu Teacher Training Center
10	Mr. Gürcan BILDIR	Coordinator of Project	Mazhar Zorlu Teacher Training Center

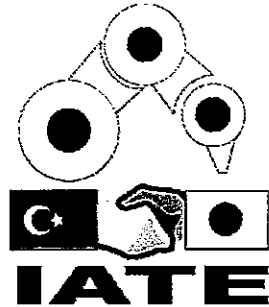
JCC Members, Japanese Side

No.	Name	Position	Affiliation
1	Mr. Takahiro YONEMURA	First Secretary	Embassy of Japan in Turkey
2	Mr. Masahiro UEKI	Senior Representative	JICA Turkey Office
3	Ms. Miyuki KONNAI	Project Formulation Advisor	JICA Turkey Office
4	Dr. Takujiro ITO	Project Chief Advisor	JICA IATE Project Expert Team
5	Mr. Gen FUJII	Project Coordinator	JICA IATE Project Expert Team

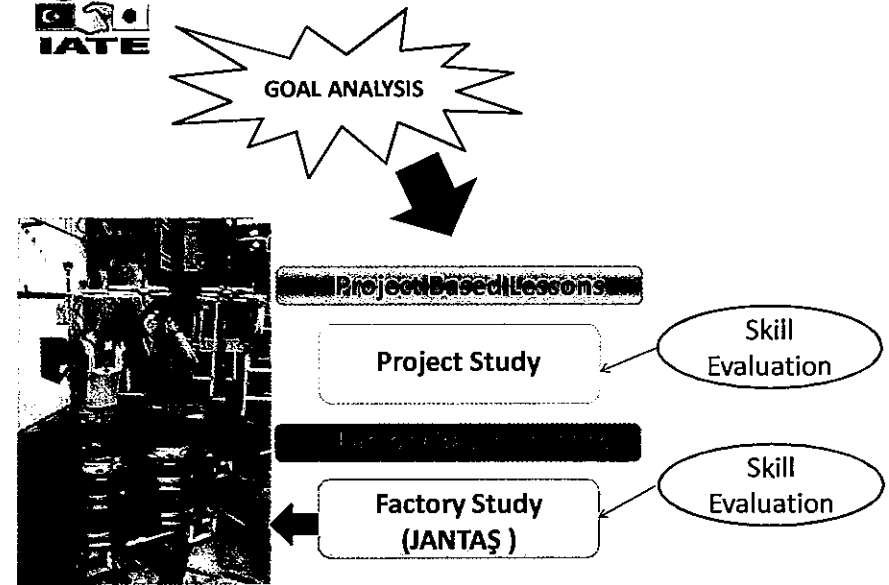


Appendix 3: Report of the Activities

ACTIVITIES OF IAT PROJECT



Curriculum Development of IAT Basic



IAT Basic Courses

Azerbaijan Country Focused Training
(13 October – 7 November)



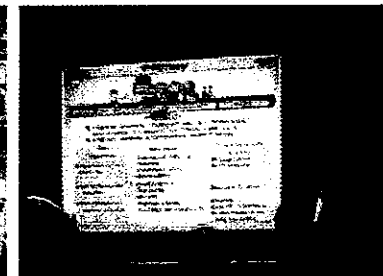
Pakistan Country Focused Training
(8 -26 December)



ENOSAD – IAT Convention & Exhibition



- International Advance Industrial Convention and Exhibition was held in 4-5, December
- 2 CP and project team attended some courses and found opportunity to introduce our project

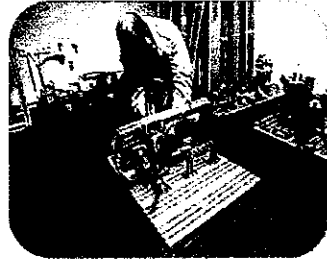




Material Development for Advance Training



Stepping & servo motor application



Position control application by stepping motor



Terminal Evaluation

Purpose of the Evaluation

- To confirm the achievement levels of Inputs and outputs and the prospect for the project.
- To identify factors or issues that have promoted or hindered the implementation of the project activities.
- To review the project outcome based on DAC 5 criteria:
 - Relevance
 - Effectiveness
 - Efficiency
 - Impact
 - Sustainability
- To draw recommendation and lesson learned for future improvement.
- To discuss and agree on the results and prepare joint terminal evaluation report.



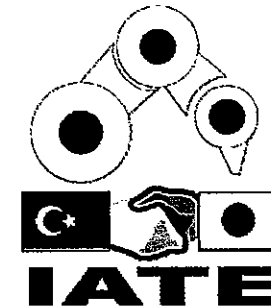
In Service Training Program

Purpose of the program

Transferring knowledge and experience acquired from the international courses conducted in scop of IATE Project to Turkish TVE Teachers as below mentioned department's

- Electricity/electronics Technology
- Machine Technology
- Information Technology
- Industrial Automation Technology

THANK YOU

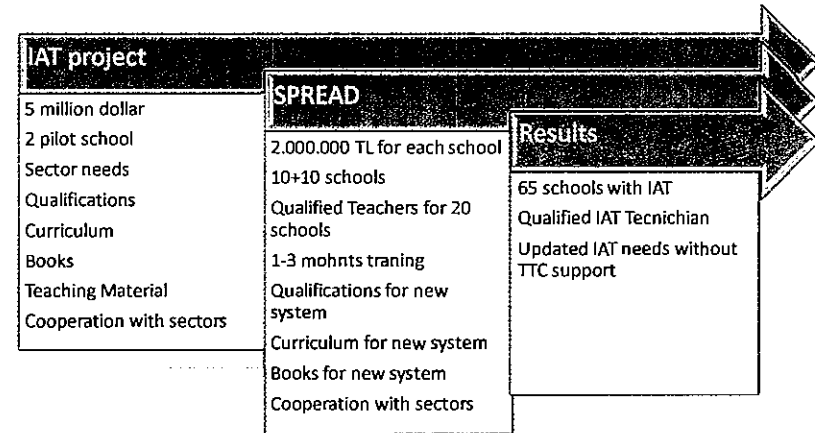


DRAFT IDEA FOR NEW PROJECT



1

Experience of TTC



2

Project Title: Project for strengthening the quality of TVE in Turkey
 Period: April 2016 – March 2017 (2 years) Ver.1 – 2016-2017

Objective :
 The quality of teaching-learning for target subjects (Electric/Electronics, Mechanics, IT, Construction, Air conditioning and refrigeration) of Technical and Vocational Education in Turkey are improved.

Output 1
 Teaching Skill of Trainers of target subjects are strengthened

Output 2
 Teaching Material of target subjects are improved

Output 3
 A model laboratory is established to conduct more effective practice

Activity 1

- Selection of the Topics to be strengthen
- Guidance and planning in Turkey
- TOT on teaching skill in Japan (Off-JT)
- TOT on teaching skill in Turkey (OIT)
- Development and validation of the materials (ref. to Activity 2 and 3)
- Provide training to all TVE High School teachers

Activity 2

- Selection of the target modules to be developed
- Development of experiment module set
 - Experiment guide
 - Teaching aid
 - Experiment kit
 - Assessment Tool
- Validation and improvement 1 and 2

Activity 3

- Identification of the practical exercise and its methodology
- Selection of the equipment
- Purchase and installation of the laboratory set
- Elaboration of the operation manual
- Validation of the practical exercise and Improvement of the laboratory configuration

Inputs

- TOT on subject teaching skill in Japan (Off-JT) (Approx. 2 months to develop 1 module material.)
- Japanese experts to support the development of the material in Turkey (1 per subject x 6 = 6 + Chief adviser + Coordinator)
- Turkish facilitator team (2 per subject x 6 = 12)
- Laboratory equipment for target Module
- Cost for material development workshop
- Cost for Training to TVE teachers

4

Process:

- Selection of the pilot high school (2 high school for one subject, total 12 high schools)
- Selection of the project team (6 teachers from each school will be selected as project team, total of 72 teachers + 12 Turkish facilitators = 84 will be the project team)
- Project guidance and orientation for all teams (1 day in Turkey)
- Selection of the target experiment module for each subjects (10 to 15 experiment module per subject) (2 days in Turkey)
- Training in Japan Batch 1 (2 months x 3 teachers x 2 schools x 6 subjects = 36 teachers + 6 facilitators per batch) to develop a model module
- Training in Japan Batch 2 (2 months x 3 teachers x 3 schools x 6 subjects = 36 teachers + 6 facilitators per batch) to develop a model module
- Development of the target experiment module (2 modules x 2 teachers team in 3 months, x 6 team = 12 modules)
- Validation of the module (pilot lesson at TVE high school and improvement of the modules, at least 2 times)



5

Detail of Preparation

- Buradaki bazı okullardaki alanların incelenerek (Japonya'dan ve Türkiye'den uzmanlar)
 - Programın incelenmesi, laboratuvarlarda ihtiyaç duyulan eğitim materyalleri
 - Laboratuvarların bu duruma uygunluğu
 - Hedef grupların görüşmeleri
 - Analizler yapılarak taslak planın oluşması



- Japonya'da fizibilite çalışmasının yapılması (6 Alan uzmanı ve 6 koordinatörü)
 - Kosenlerin programlarının incelenip taslak plana uygun olan ile eşlenmesi
 - Laboratuvar ortamlarının uygunluğu
 - Çalışma yapılacak okullar ile çalışmaların yapılması
 - Analizler yapılarak taslak planın oluşturulması.

6

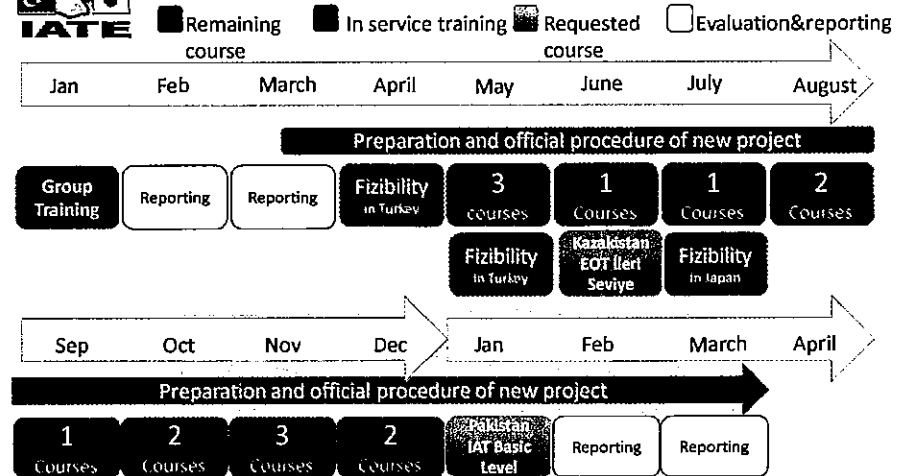
2015-2016 SCHEDULE



7



2015 – 2016 Schedule



8

Draft Project Design

Project Title: Project for strengthening the quality of TVE in Turkey

Period: April 2016 – March 2017 (2 years)

Ver.1 – 2014.12.23

Objective: The quality of teaching-learning for target subjects (Electric/Electronics, Mechanics, IT, Construction, Air conditioning/ refrigeration and Renewable Energy) of Technical and Vocational Education in Turkey are improved.

<p>Output 1 Teaching Skill of Trainers of target subjects are strengthened</p>	<p>Output 2 Teaching Material of target subjects are improved</p>	<p>Output 3 A model laboratory is established to conduct more effective practice</p>
<p>Activity 1</p> <ul style="list-style-type: none"> • Selection of the Topics to be strengthen • Guidance and planning in Turkey • TOT on teaching skill in Japan (Off-JT) • TOT on teaching skill in Turkey (OJT) • Development and validation of the materials (ref. to Activity 2 and 3) • Provide Training to all TVE High School teachers 	<p>Activity 2</p> <ul style="list-style-type: none"> • Selection of the target modules to be developed • Development of experiment module set <ul style="list-style-type: none"> ○ Experiment guide ○ Teaching aid ○ Experiment kit ○ Assessment Tool • Validation and improvement 1 and 2 	<p>Activity 3</p> <ul style="list-style-type: none"> • Identification of the practical exercise and its methodology • Selection of the equipment • Purchase and installation of the laboratory set • Elaboration of the operation manual • Validation of the practical exercise and improvement of the laboratory configuration
<p>Inputs</p> <ul style="list-style-type: none"> • TOT on subject teaching skill in Japan (Off-JT) (Approx. 2 months to develop 1 module material.) • Japanese experts to support the development of the material in Turkey (1 per subject x 6 = 6 + Chief adviser + Coordinator) • Turkish facilitator team (2 per subject x 6 = 12) • Laboratory equipment for target Module • Cost for material development workshop • Cost for Training to TVE teachers 		
<p>Process:</p> <ol style="list-style-type: none"> 1. Selection of the pilot high school (2 high school for one subject, total of 12 high schools) 2. Selection of the project team (6 teachers from each school will be selected as project team, total of 72 teachers + 12 Turkish facilitators = 84 will be the project team) 3. Project guidance and orientation for all teams (1 day in Turkey) 4. Selection of the target experiment module for each subjects (10 to 15 experiment module per subject) (2 days in Turkey) 5. Training in Japan Batch 1 (2 months x 3 teachers x 2 schools x 6 subjects = 36 teachers + 6 facilitators per batch) to develop a model module 6. Training in Japan Batch 2 (2 months x 3 teachers x 3 schools x 6 subjects = 36 teachers + 6 facilitators per batch) to develop a model module 7. Development of the target experiment module (2 modules x 2 teachers team in 3 months, x 6 team = 12 modules) 8. Validation of the module (pilot lesson at TVE high school and improvement of the modules, at least 2 times) 		

Some detail information

<p>Goal of the outputs of the project: For each of the target 6 subjects,</p> <ul style="list-style-type: none">• Model laboratory with 12 experiment set will be developed.• Teaching materials for above experiment set will be developed.• 72 Trainers will be developed unable to develop the experiment modules and train other TVE teachers in Turkey. (12 Trainers x 6 subjects)
<p>Implementation Team</p> <ul style="list-style-type: none">• 1 general coordinator from GD of TVE• 12 facilitators (2 per subject)• Administration support staff
<p>For selection of the target modules and organizing the team for the development:</p> <ul style="list-style-type: none">• Each subject is composed by 46 lessons x 10 modules = approx. 460 modules.• Goal for the development of the experiment set: 10 to 15 per department.• The limit of the capacity of 1 teacher is: 1 set /semester, but is recommendable to work in team of 2 teachers.• Could organize 3 team of 2 teachers x 2 pilot school, total of 6 team develop 1 experiment kit x 2/year = 12 experiment kit in 1year.
<p>Requirement for selection of the Trainers</p> <ol style="list-style-type: none">1. Chief of laboratory with min. 3 years of experience.2. Must be between 5 to 10 years of experience in teaching.3. University bachelor degree on the target subject



Appendix 6: Proposing Schedule for new project

Tentative Schedule of the project (2016 - 2018)

Year	2016																																																							
Month	January				February				March				April				May				June				July				August				September				October				November				December											
Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
First Batch													Guidance				Training in Japan								Purchase of Equipment												Development of Experiment module 1																			
Second Batch																																	Guidance				Training in Japan								Purchase of Equipment											

Year	2017																																																			
Month	January				February				March				April				May				June				July				August				September				October				November				December							
Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
First Batch													Development of Experiment module 2																								Development of TOT program and material								Finalization							
Second Batch													Development of Experiment module 1																								Development of Experiment module 2								Development of TOT program and material				Finalization			

Year	2018																																																			
Month	January				February				March				April				May				June				July				August				September				October				November				December							
Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
First Batch																									In-Service Training																											
Second Batch																													In-Service Training																							

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**MINUTES OF MEETING
OF
THE EIGHTH JOINT COORDINATING COMMITTEE
ON
THE INDUSTRIAL AUTOMATION TECHNOLOGY (IAT)
EXTENSION PROJECT FOR CENTRAL ASIAN AND MIDDLE EAST
COUNTRIES IN THE REPUBLIC OF TURKEY**

Agreed upon between


Ministry of National Education,

Turkish Cooperation and Coordination Agency

and

Japan International Cooperation Agency

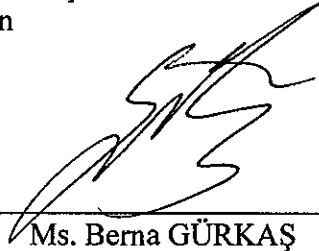
Ankara
10th March, 2015



Ms. Sennur Çetin,
Head of Social Partners and Project Group
Ministry of National Education



Dr. Takujiro Ito
Chief Adviser
JICA Expert Team



Ms. Berna GÜRKAŞ
On behalf of Dr. Mehmet Yılmaz
Head of Foreign Affairs and Partnerships
Turkish Cooperation and Coordination Agency

The Eighth Joint Coordinating Committee (hereinafter referred to as the "JCC") Meeting on the Industrial Automation Technology (IAT) Extension Project for Central Asian and Middle East Countries in the Republic of Turkey (hereinafter referred to as "the Project") was held on March 10, 2015, at Mazhar Zorlu Technical and Industrial Vocational High School Teachers Training Center, Bornova, Izmir.

The representatives of Ministry of National Education (hereinafter referred as "MoNE), Turkish Cooperation and Coordination Agency (hereinafter referred as "TIKA"), Japan International Cooperation Agency (hereinafter referred as "JICA"), as well as Japanese Expert Team, Turkish staffs in Teacher Training Center (hereinafter referred as "TTC"). (See Annex 1 for the details.)

The result of the meeting followed by the participants along the agenda has been summarized below. (See Annex 2 for the details of agenda)

1. Welcome and Explanation of the Agenda
Welcome speech and the agenda of the meeting were conveyed by Ms. Şennur Çetin, Head of Group of MoNE.
2. Report on the 3 years of the Project activities was presented by Mr. Gürcan Bildir, Coordinator of the Project.
3. Summaries of the major achievement and lessons-learned were presented by Dr. Takujiro Ito, the chief adviser of the Project.
4. Prospective plan of the TTC activities after the Project termination was presented by Mr. Osman Egemen Döğer, lecturer of the TTC.
5. Remark of the Project by TIKA
TIKA's remark was conveyed by Ms. Berna GÜRKAŞ
6. Remark of the JICA for the Project
JICA's Remark was conveyed by Ms. Miyuki Konnai
7. Conclusion of the 8th JCC was presented by chair person, Ms. Şennur Çetin, She officially announced the closing of the Project.





Industrial Automation Technology Extension Project for Central Asian and Middle East Countries

MoNE-TIKA-JICA Cooperation Project
Mazhar Zorlu Technical and Industry Vocational High School Teacher Training Center
Mevlana Mah. 1776 Sok. No: 2/2 Bornova - İZMİR TURKEY
Tel & Fax: +90 232 342 7043



Ministry of National Education
Republic of Turkey

The Eighth Joint Coordinating Committee Meeting and Closing Ceremony of the IATE Project

- Date** : March 10, 2015 (Tuesday)
Time : 10:30 – 12:00
Venue : Mazhar Zorlu Vocational and Technical Anadolu High School Teachers Training Center, Bornova, Izmir
Chair : Ms. Şennur ÇETİN, Head of Social Partners and Project Group, MoNE
Moderator : Mr. Yusuf VURAL, Principal of Mazhar Zorlu Vocational and Technical Anadolu High School

Agenda:

1. Welcome and explanation of the Agenda by Mr. Yusuf VURAL (2 min.)
2. Summary Report of the 3 years activities of the Project, by Mr. Gürcan BILDIR (20 min.)
3. Summary of the major achievement and lesson learned, by Dr. Takujiro ITO (10 min.)
4. Proposing plan of activities of TTC after Project, by Mr. Egemen DÖĞER (10 min.)
5. TIKA's remark conveyed by Ms. Berna GÜRKAŞ
6. JICA's Remark Conveyed by Ms. Konnai
7. Conclusion of the 8th JCC, by Chair Person, Ms. Şennur ÇETİN (5 min.)

Following the program at Conference Hall, all the participants are invited to the TTC building.

8. Exhibition of the project outputs, demonstration of the IAT system (20 min.)
9. Reception
10. Award of recognition
11. Closing remarks by Ms. Şennur ÇETİN

Attendance List for 8th JCC Meeting

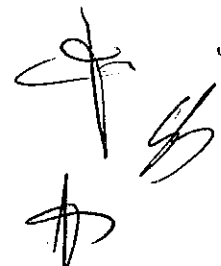
JCC Members, Turkish side

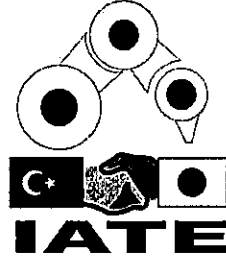
10/03/2015

No.	Name	Position	Affiliation
1	Ms. Şennur ÇETİN	Head of Department	GD of Vocational and Technical Education, MoNE
2	Ms. Berna GÜRKAŞ	Expert	Turkish Cooperation and Coordination Agency
3	Dr. Mehmet YAZAR	Expert	GD of Vocational and Technical Education, MoNE
4	Ms. Kübra Kraibis	Assistant Expert	GD of Vocational and Technical Education, MoNE
5	Mr. Yusuf VURAL	Principal	Mazhar Zorlu Technical and Industrial Vocational High School
6	Mr. Egemen DÖĞER	Head of IAT Department	Mazhar Zorlu Teacher Training Center
7	Mr. Gürcan BILDIR	Coordinator of Project	Mazhar Zorlu Teacher Training Center
8	Mr. Murat ÖZDEVECİ	TTC Trainer	Mazhar Zorlu Teacher Training Center
9	Mr. İsmail AKTAŞ	TTC Trainer	Mazhar Zorlu Teacher Training Center
10	Mr. Bülent VARDAL	TTC Trainer	Mazhar Zorlu Teacher Training Center

JCC Members, Japanese Side

No.	Name	Position	Affiliation
1	Ms. Miyuki KONNAI	Project Formulation Advisor	JICA Turkey Office
2	Dr. Emin ÖZDAMAR	Senior Program Officer	JICA Turkey Office
3	Dr. Takujiro ITO	Project Chief Advisor	JICA IATE Project Expert Team
4	Mr. Gen FUJII	Project Coordinator	JICA IATE Project Expert Team
5	Ms. Neslihan BILDIR	Project Assistant	JICA IATE Project Expert Team





Industrial Automation Technology Extension Project for Central Asian and Middle East Countries



Project Activities

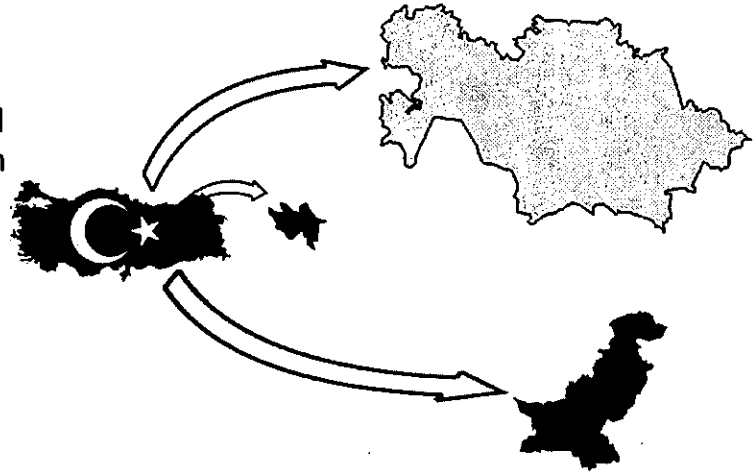
- Need Survey Study before the starting of project
- IAT Training Courses
- IAT Training program
- Training Materials
- Follow up for the training impacts
- JCCs
- Supportive activities



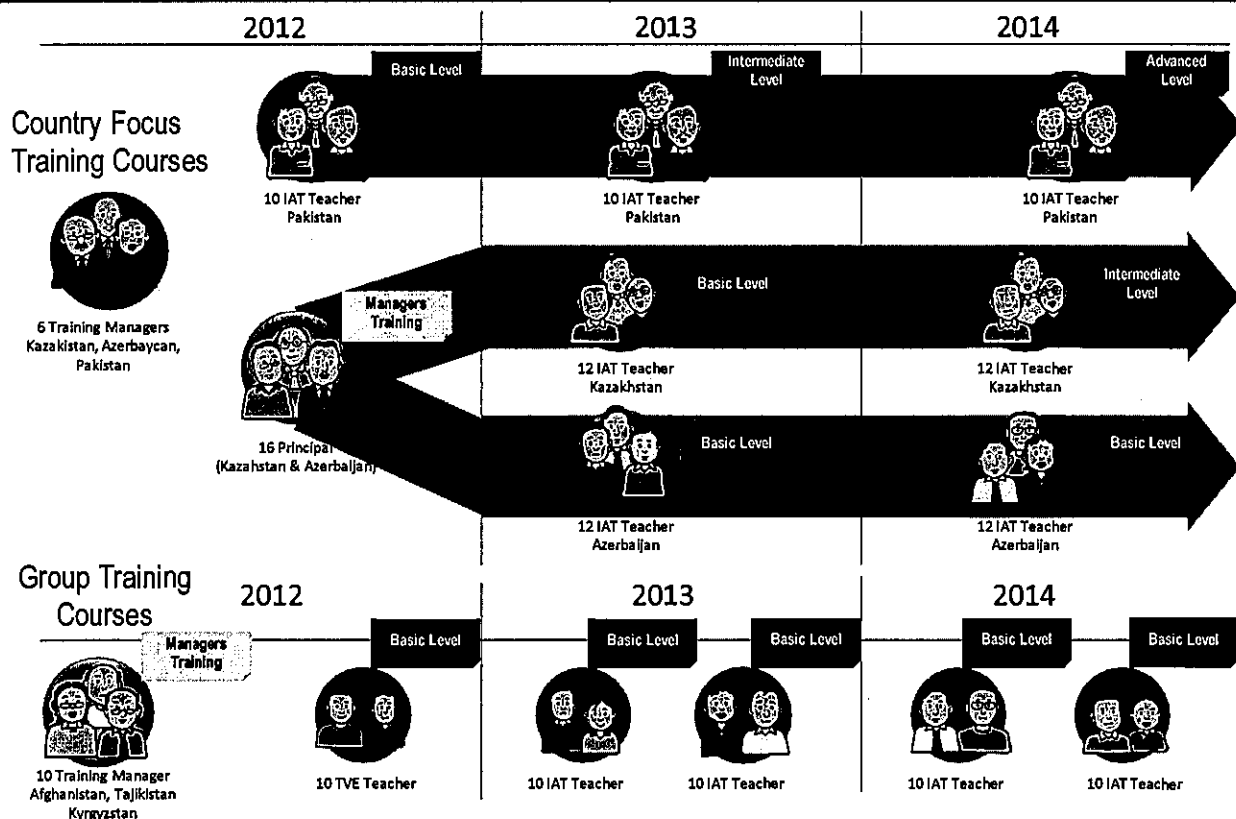
Need Survey Study

In order to introduce IATE Project and define the training needs of target countries, a survey team with the members from MoNE, TIKa and JICA experts, has conducted a need survey study by visiting Azerbaijan, Kazakhstan and Pakistan in consideration of certain criteria: Those criteria are:

- Education systems of target countries
- National education standards
- The situation of IAT education
- IAT educational program
- Analysis on technical schools
- Existing technical equipment



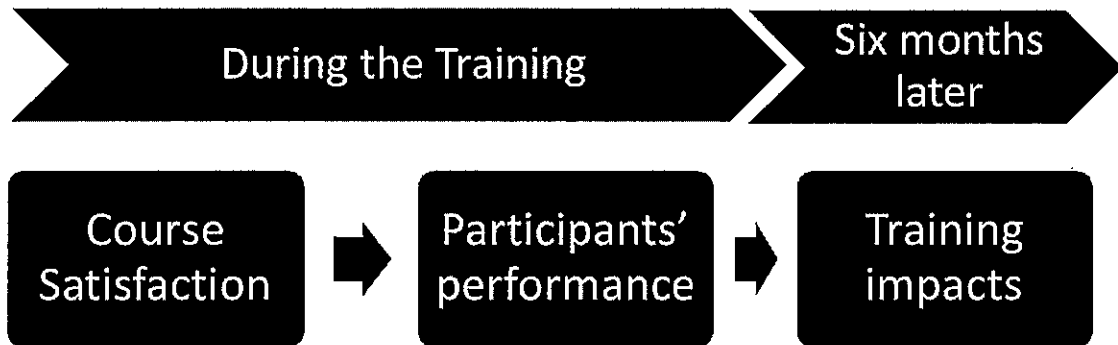
IAT Training Courses





IAT Training Courses

Modern evaluation methods have been applied on IAT International Training Courses.



IAT Training Courses

The results of satisfaction questionnaires by the participants:

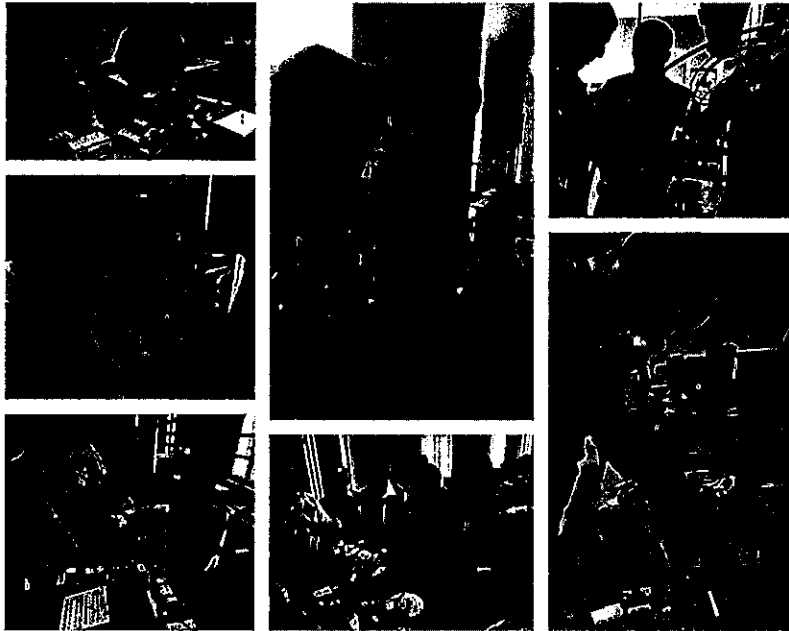
Appropriateness of course subjects	%98
Course management	%98
Accommodation	%91



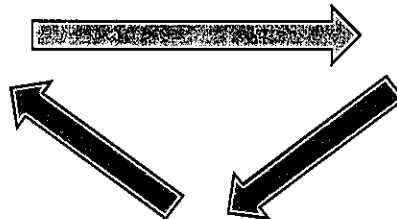
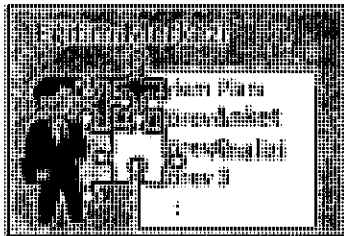


IAT Training Courses

In conducted IAT courses, participants' performance tests and their project studies have been evaluated. Based on the evaluation results, all the participants have completed the courses successfully.



Training Impacts



Hedef Ülkeler

Anket

Görev 1 OK

Görev 2 OK

Görev 3 OK

:

The screenshot shows the website's header with the IAT logo and navigation links. The main content area includes a 'News and Events' section with three articles: 'New Group Training will start on April 2013', 'Pakistan Country Focus Training is starting', and 'IAT sectorial Meeting 7-8th Nov. 2012'. Below this is a 'Training Center Facilities' section with icons for Accommodation, Meal by Shipyard, Recreation, Training Facilities, and Transportation. On the right side, there is a 'Login' form with fields for Username and Password, and an 'Information' box with a phone number: Call U. + 90 232 3436434.

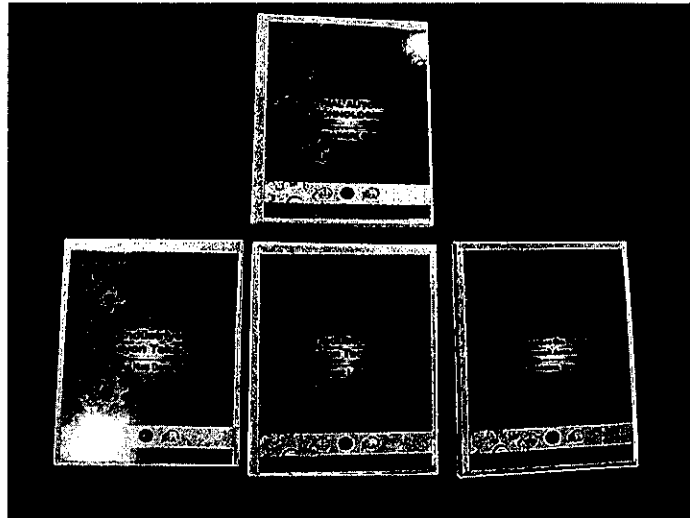
- In order to monitor and support the activities of participants in their course, a web-based support system has been established. (www.induste.com).
- This web-based support system has been introduced to the participants and the subscription steps have been completed during the training period.
- Through this network between training center and participants, monitoring progress will be possible after the termination of the project.



Training Materials

In accordance with the training program, developed by IATE Project, the training materials, shown on the picture, have been prepared for all subjects in Turkish, English and Russian languages and used in training courses.

- Training program
- Lecture Plan
- Trainers' Materials
- Textbooks, Application Notes
- Evaluation Tools
 - Moduel Evaluation
 - Course Evaluation
 - Pre test – Post test
 - Evaluation of Factory visits
 - Evaluation of project studies

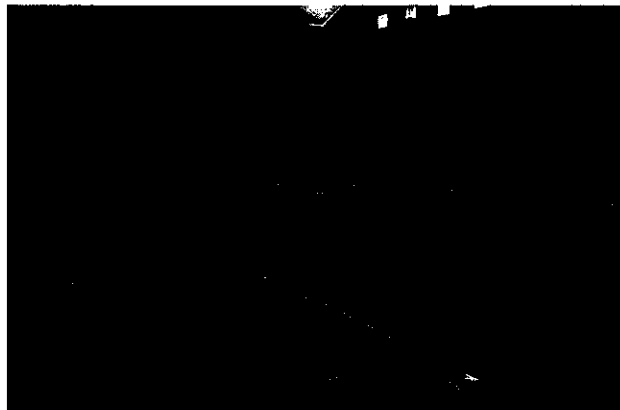


Joint Coordination Committee Meetings

In order to achieve the outputs, defined on IATE Project PDM, total 7 joint coordination committee meetings have been conducted.

In those meetings, general discussion topics were like that:

- Project progress
- Activity Calendar
- Coordination between the related institutions
- Training preparations
- Training center activities





Supportive Activities

IAT Sectorial Meeting

In year 2012, a sectorial meeting was organized in order to introduce IATE Project to the managers of target countries as well as the related industrial companies. And the attended companies exhibited their products in the exhibition field in this organization.



Instructional Design Workshop

Under the leadership of Instructional design Specialist Prof. Katsuaki SUZUKI, a workshop was conducted with the attendance of trainers from industry, academicians from universities and the teachers from our school.



Supportive Activities

Workshops on Training Program Development and Evaluation Methods

Training program development workshop was conducted in year 2013 and training program of the international courses have been revised under the supervision of Japanese experts Mr. Hidekazu KUMAGAI.

Then, in 2014, course evaluation criteria and instructional design methods were revised with the consultation of Prof. Katsuaki SUZUKI.



Technology Transfers

Mr. Hidekazu KUMAGAI, who is expert on automation system design, provided technical support to Turkish lecturers on production techniques of factory automation and mechanisms.





Supportive Studies

Study Trip to Technology Faculties

Mechatronics Engineering departments of Technology Faculties in denizli, Isparta, Afyon and Kütahya cities were visited by Japanese Project experts and Turkish counterparts together.



Innovative Approaches on Industrial Automation

The outputs of innovative training program, used in our project, have been explained to to the educational institutions representatives through the presentations by Kazakhstan participants.





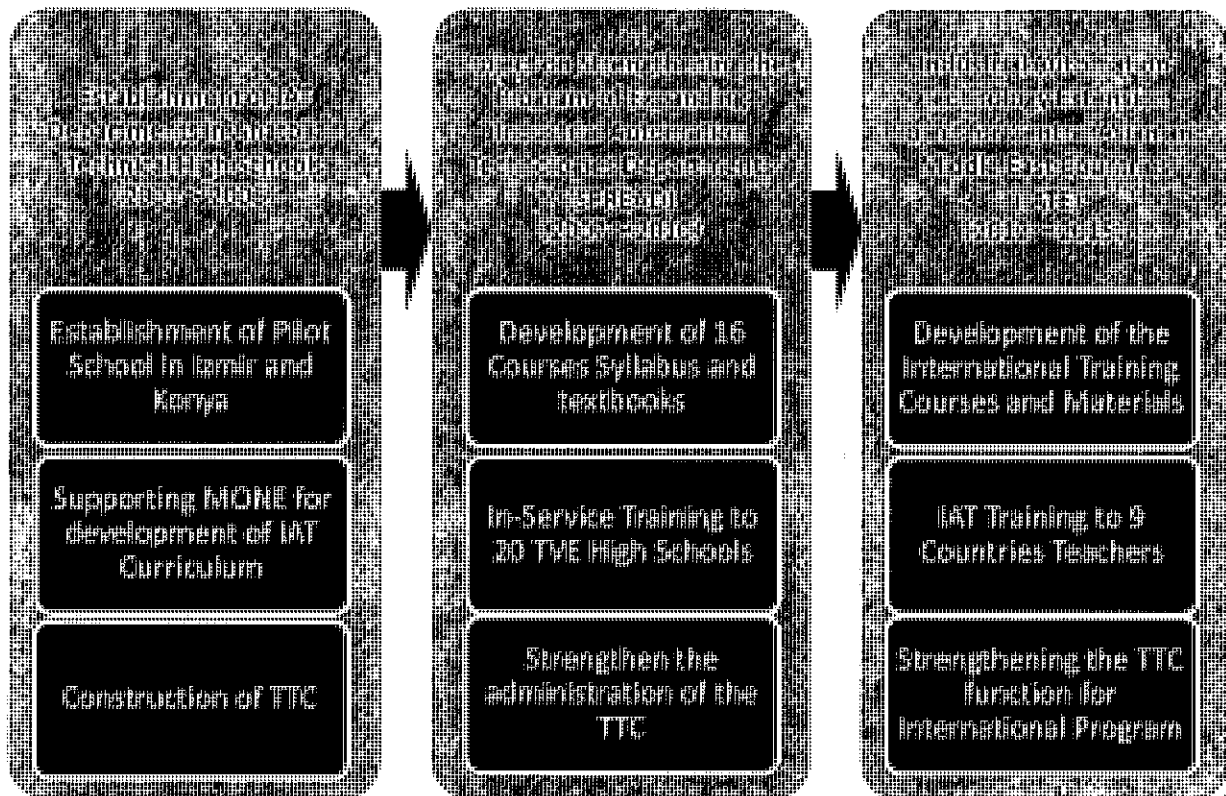
The Industrial Automation Technology Extension Project
for Central Asian and Middle East countries (IATE)

TEKNOLOJİLERİN İNŞAAT VE
ENDÜSTRİYEL OTOMASYON
ALANINDA UZAKTAN
EĞİTİMİNİN
GELİŞTİRİLMESİ

Izmir, Turkey



Progress of the results by the project



Most Relevant Impacts

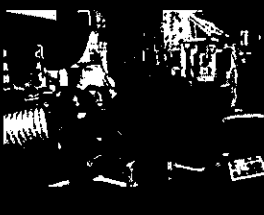
**National
Education**



**International
Training**



**Industry
Sector**

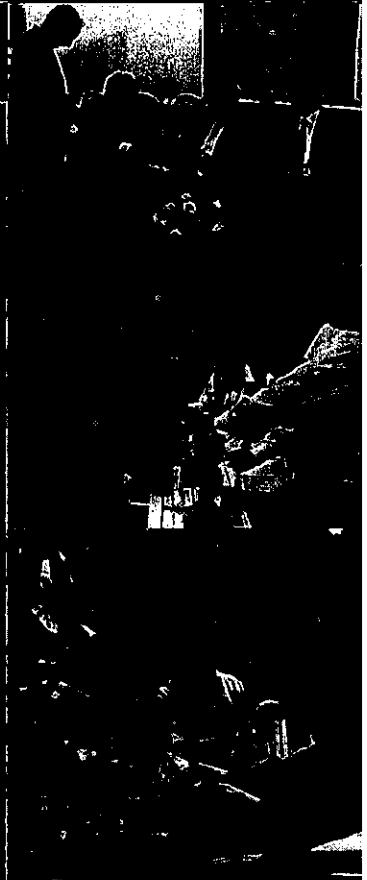


3

Notable results

Pakistan

- Secretary of Education signed the agreement with TTC survey team.
- Undersecretary attended a seminar in TTC.
- 10 participants trained during 3 years in TTC.
- Participants started to introduce the new content of IAT in their colleges.



Notable results

Kazakhstan

3 out of 4 colleges has started the new program on IAT

- Almaty State College of Energy and Electronics Technologies opened new course in sept. 2014 with 27 students.
- Taldikorgan Industrial College has started the IAT course in 2013, now 25 for each of 1st and 2nd year courses (total of 50 students)
- Zhambyl Polytechnical College started in 2014 with 50 students.
- Almaty State Polytechnic College made official application and waiting for approval.



Lesson Learned

Country Focused Training Program

- Needs survey was effective for making country specific strategy as well to get commitment of the target countries
- With country focuses training, we could adapt to the need of each countries

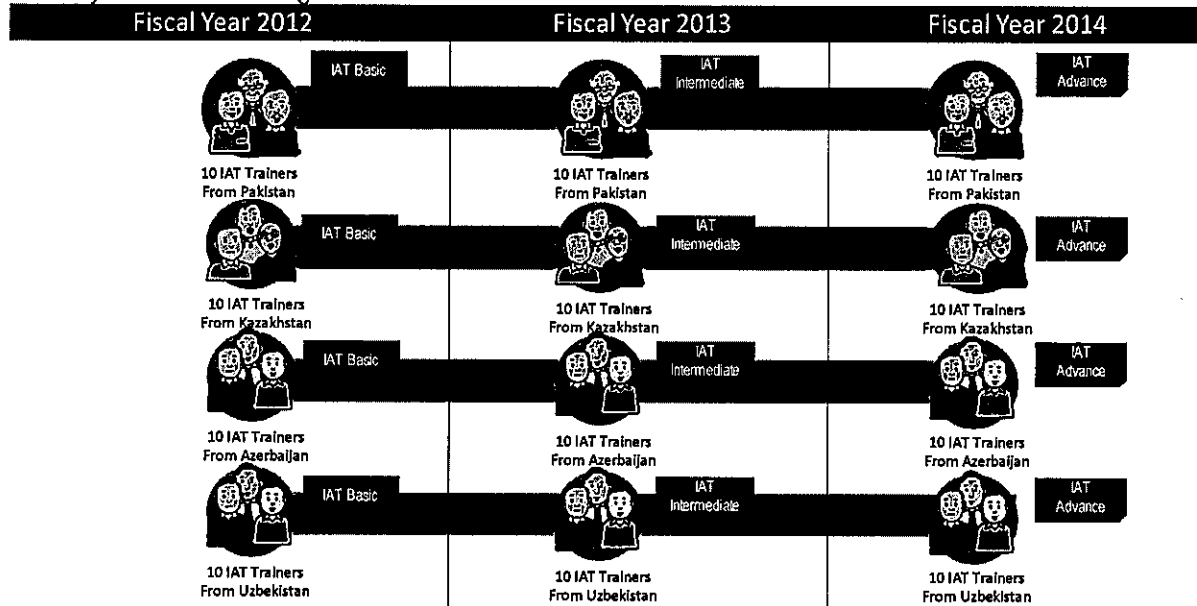


Training Program Structure (Original Plan)

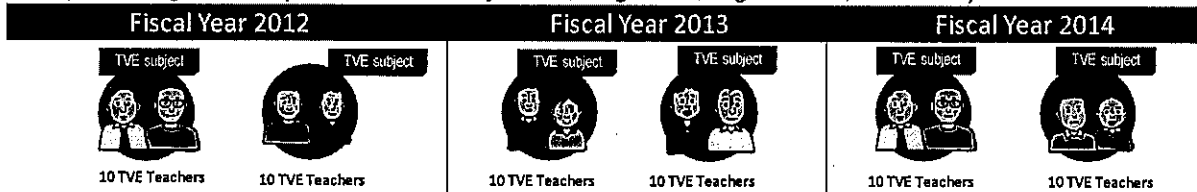
Action Plan A
Basic IAT Box are the
Training Content

Country Focused Training Course

Original Plan, April 2012



Group Training Course (Turkmenistan, Tajikistan, Kirgizstan, Afghanistan, Palestine)

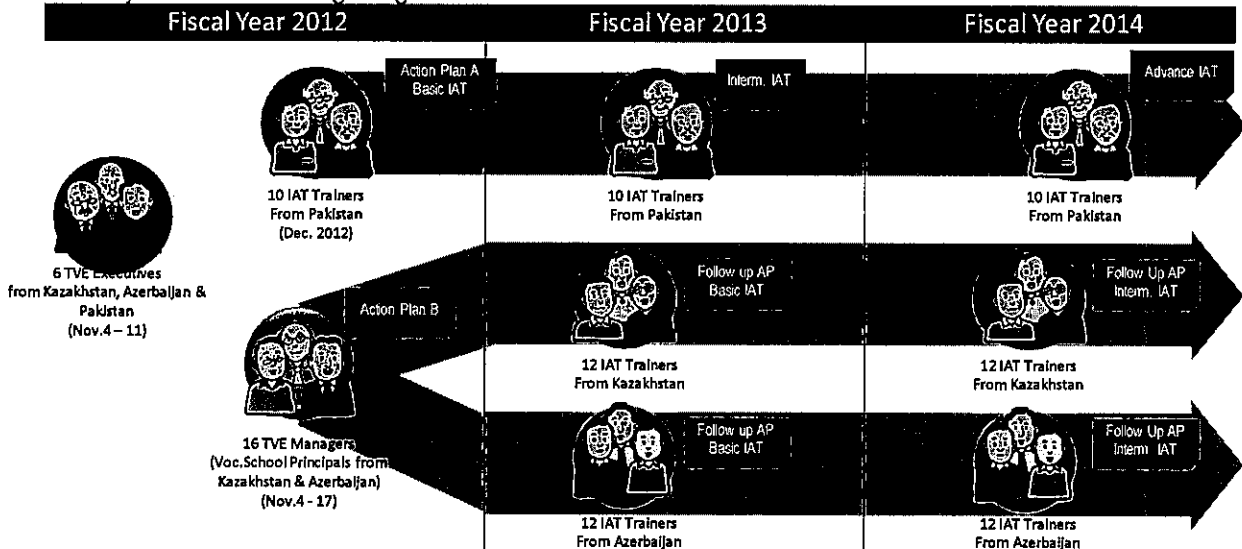


Training Program Structure (Modified Plan)

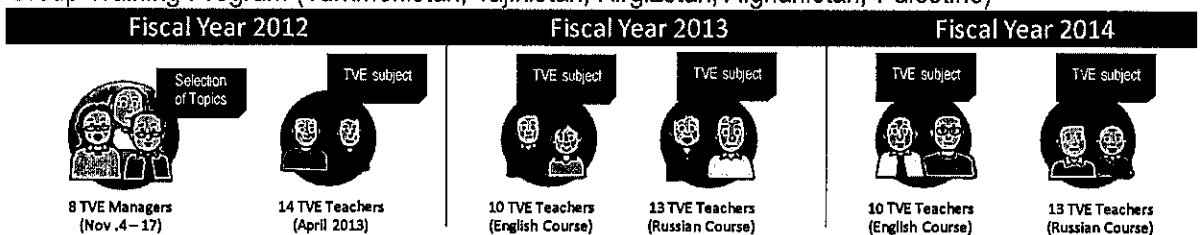
Action Plan A
Basic IAT Box are the
Training Content

Country Focused Training Program

Rev.2, May 2013



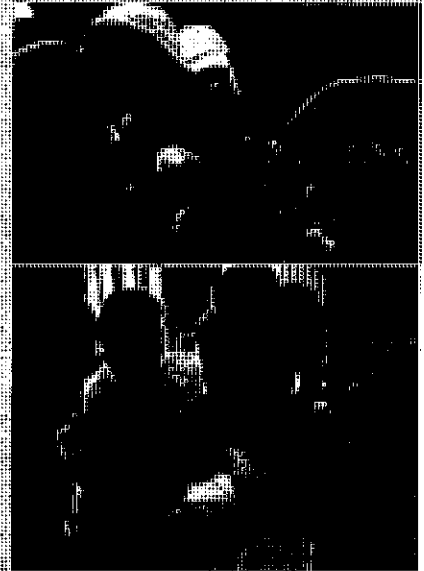
Group Training Program (Turkmenistan, Tajikistan, Kirgizstan, Afghanistan, Palestine)



Lesson Learned

Group Training Program

- The situation of the education and curriculum are very different each country, so is difficult to select appropriate candidate with common requirement.
- The courses should organized according the language, not by area or level.
- Group training should focused on promotion of IAI rather than technical transfer.



Lesson Learned: General finding

Industrial Automation Technology Education needs

- For some of the countries, maybe still bit early to introduce the IAT due to the need of the HR market, but for some others, this is a new trend and this program presence was very high. (e.g. Pakistan, Kazakhstan)



Recommendation

- TTC has facilities, equipment, training program and trainers with international quality standard. There was big investment from both countries: Turkey and Japan. This is a results of our cooperation and friendship.
- Now we hope this center serve to support universities, OSBs, TVE High Schools and industries for Human Resource development to industry sector of Turkey.



İÇERİK

- Neler yapıldı
 - 1.Proje
 - 2.Proje
 - 3.Proje
- Kazanımlar
- Kapasite ve İnsan Kaynağı
- Sürdürülebilirlik

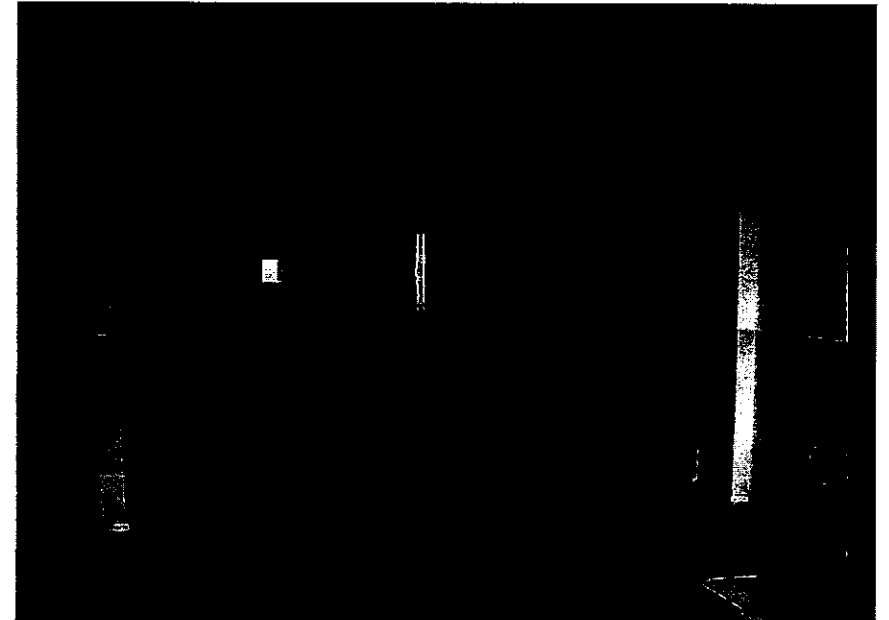
1. PROJE (2001-2006) ALANIN KURULMASI

SONUÇLARI

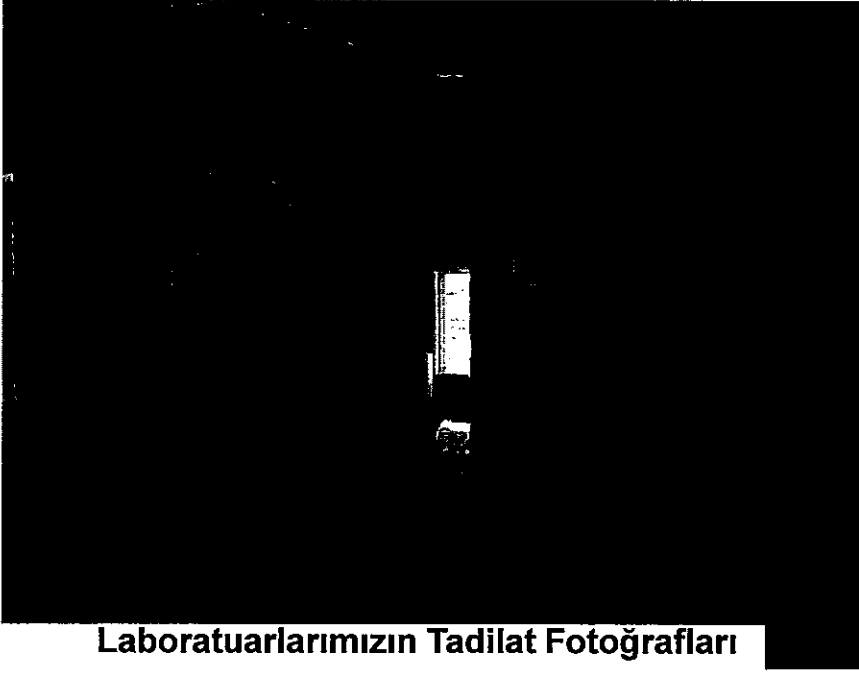
Sanayi ihtiyaçlarına göre
2 okulda EOT alanının kurulumu
Laboratuvarların planı ve kurulumları
Derslerin ve konuların belirlenmesi
Eğitim programı
Eğitim Materyalleri
Kitaplar ve yazılı kaynaklar

KAZANIMLAR

İhtiyaç analizleri
İhtiyaca uygun program geliştirme
Programa uygun etkin eğitim materyalleri geliştirme
Ders kitabı yazımı



Laboratuvarlarımızın Tadilat Fotoğrafları



Laboratuvarlarımızın Tadilat Fotoğrafları



Laboratuvarlarımızın Tadilat Fotoğrafları



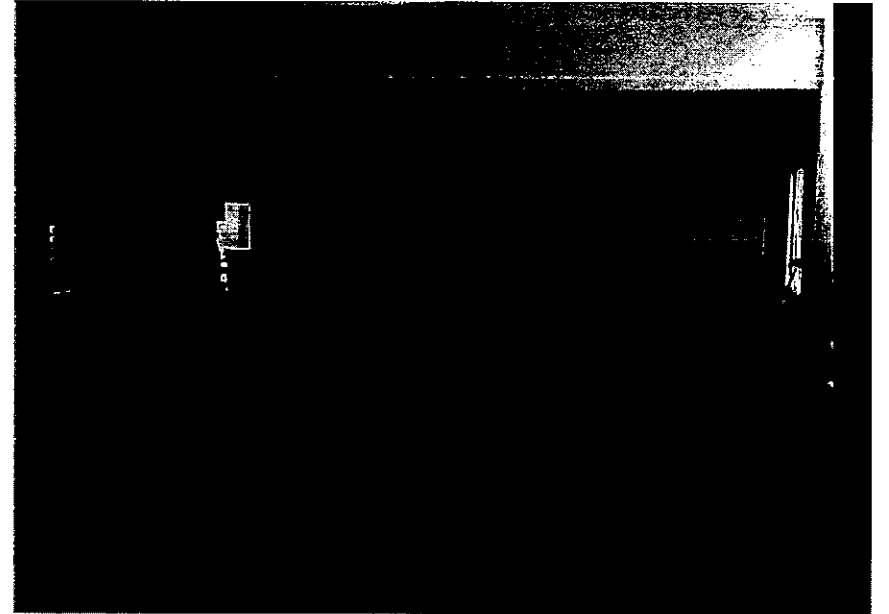
Laboratuvarlarımızın Tadilat Fotoğrafları



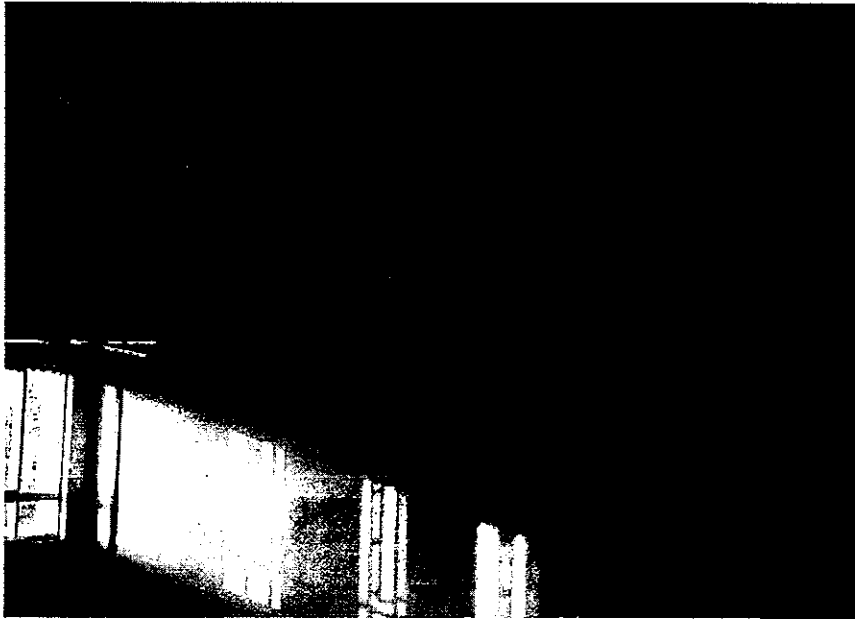
Laboratuvarlarımızın Tadilat Fotoğrafları



Laboratuarlarımızın Tadilat Fotoğrafları



Laboratuarlarımızın Tadilat Fotoğrafları



Laboratuarlarımızın Tadilat Fotoğrafları



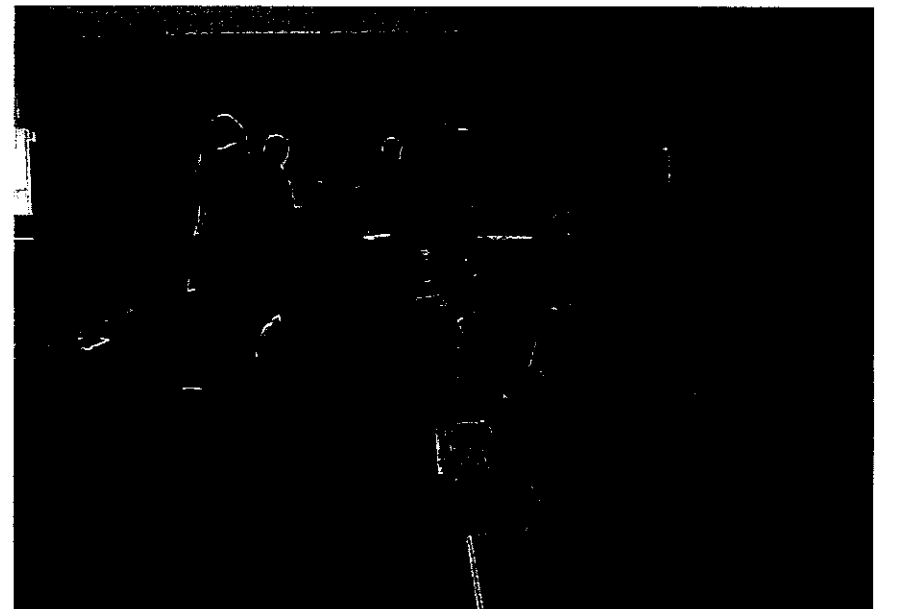
Tabanın Döşenmesi



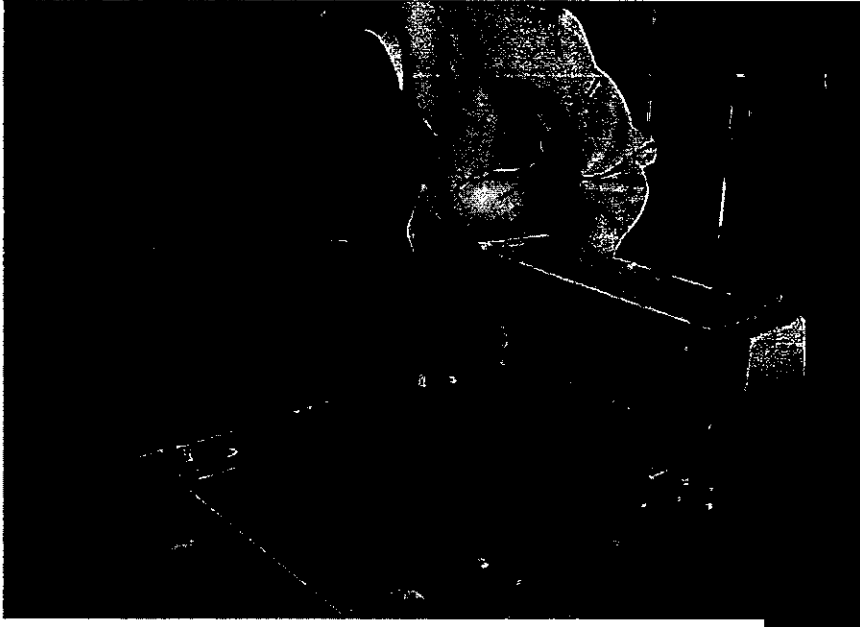
Multimedya Laboratuvarının Yerleřtirilmesi



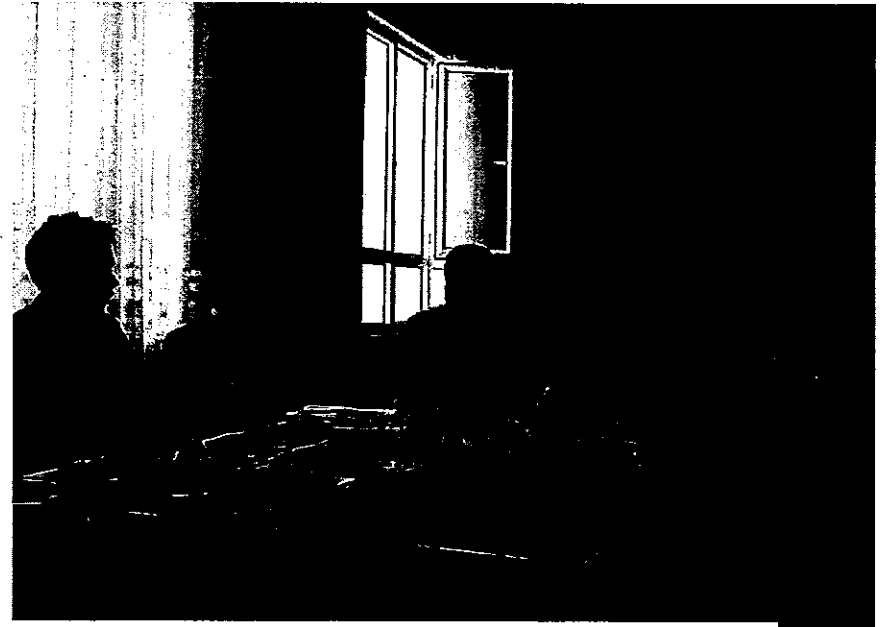
Bilgisayarların Kurulumu



Bilgisayarların Kurulumu



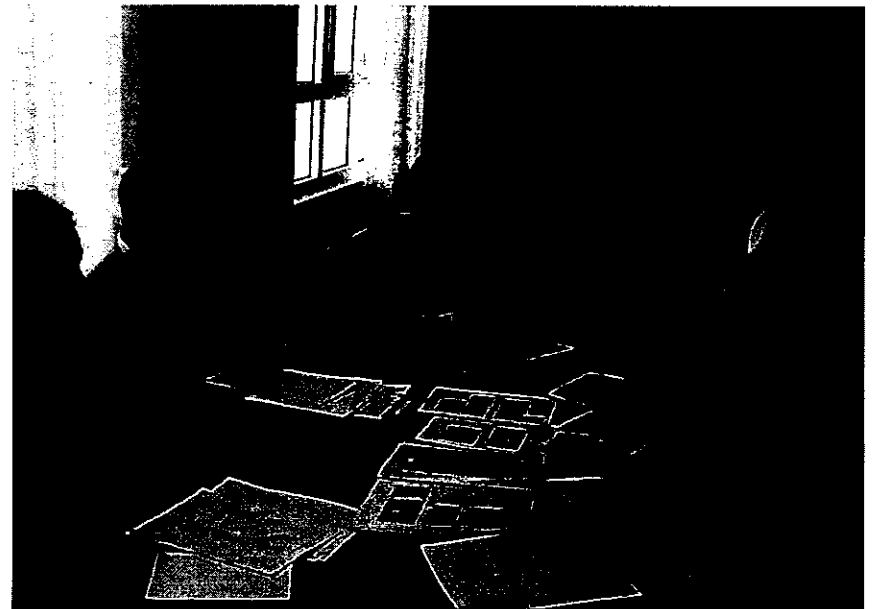
Bilgisayarların Kurulumu



Proje Çalışmaları



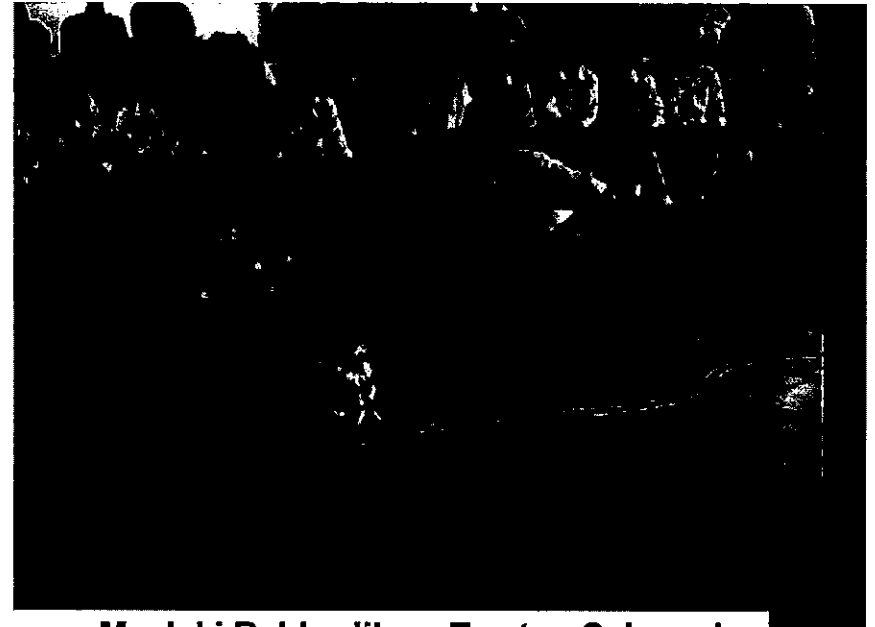
Proje Çalışmaları



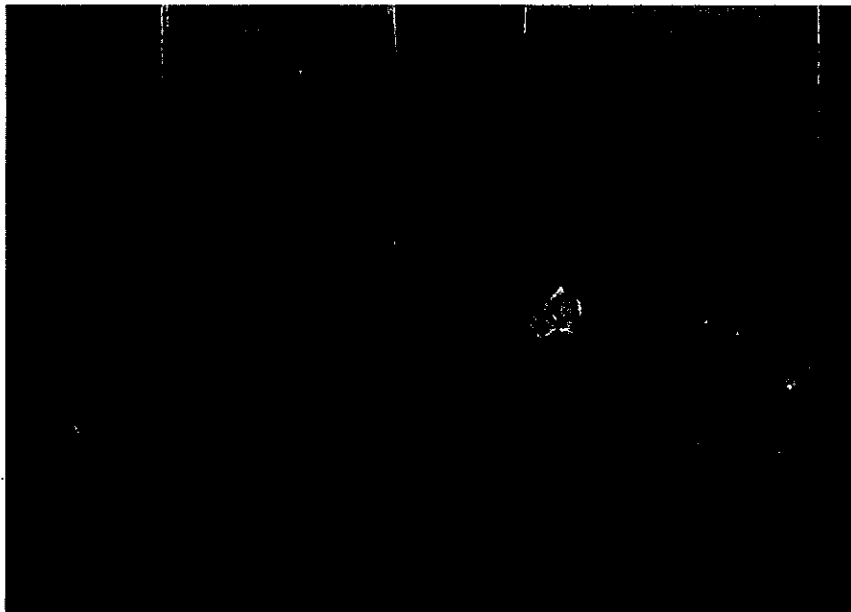
Proje Çalışmaları



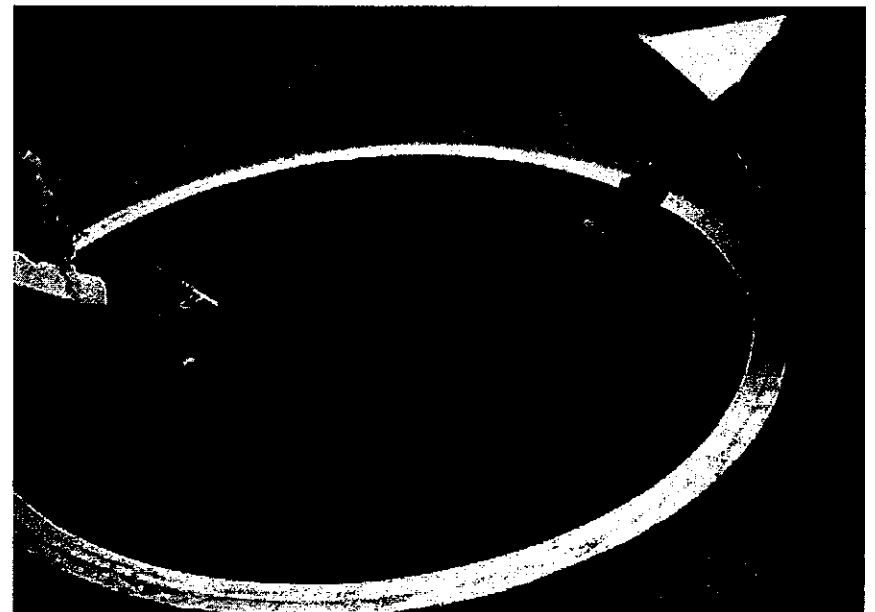
Proje Çalışmaları



Mesleki Rehberlik ve Tanıtım Çalışmaları



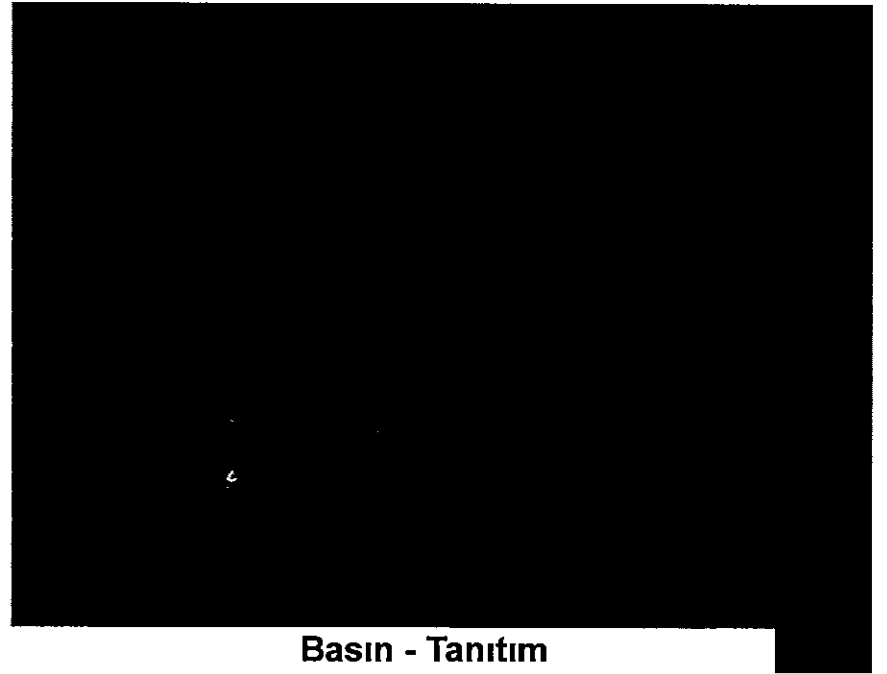
Mesleki Rehberlik ve Tanıtım Çalışmaları



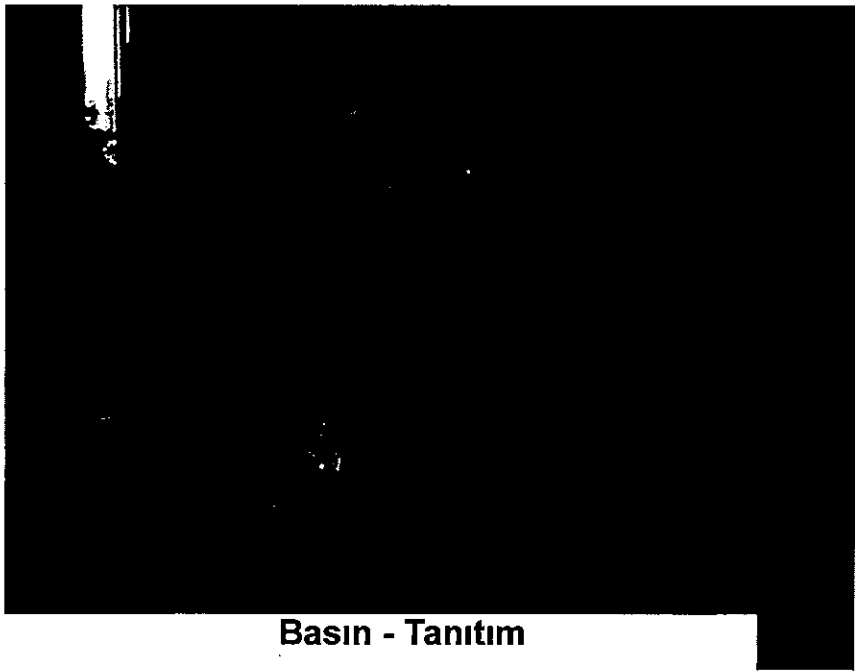
Mesleki Rehberlik ve Tanıtım Çalışmaları



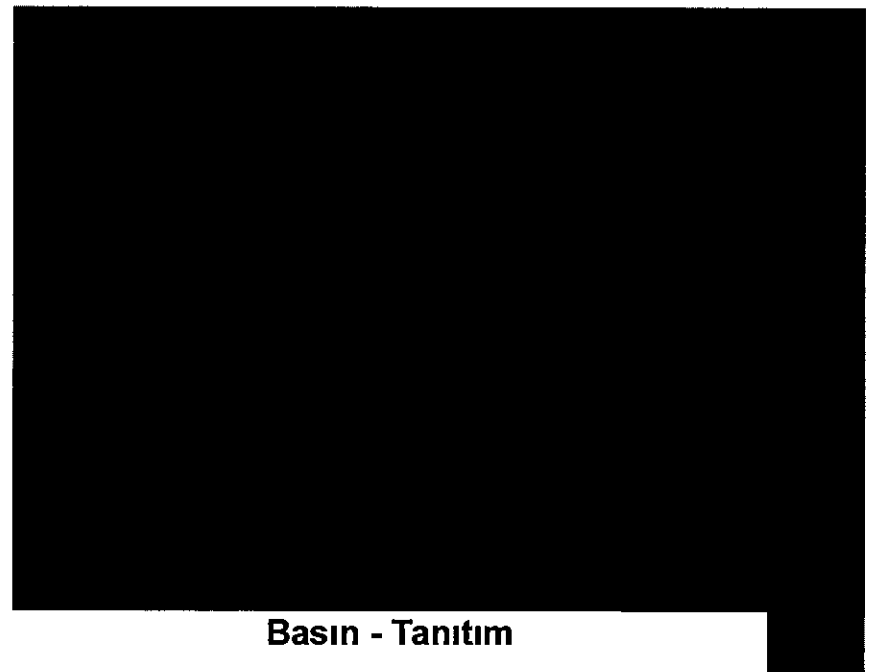
Mesleki Rehberlik ve Tanıtım Çalışmaları



Basın - Tanıtım



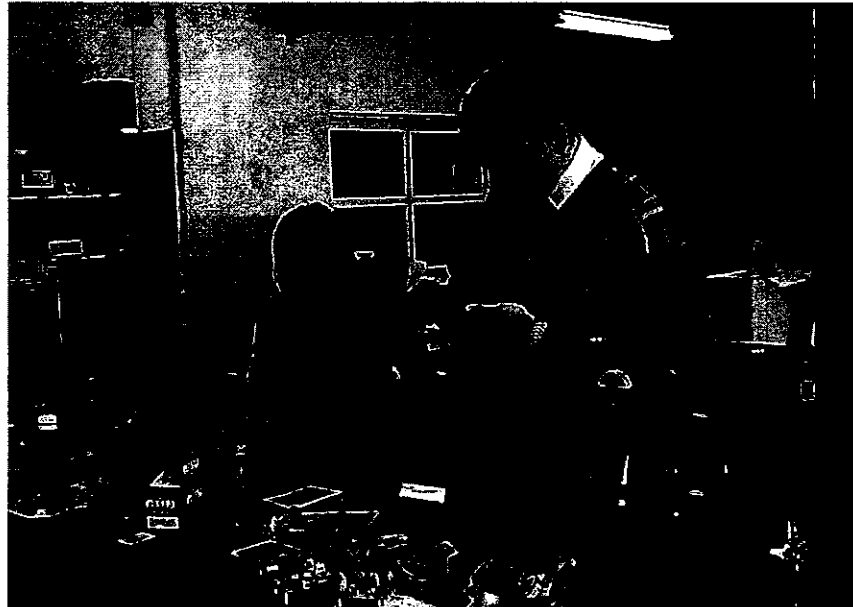
Basın - Tanıtım



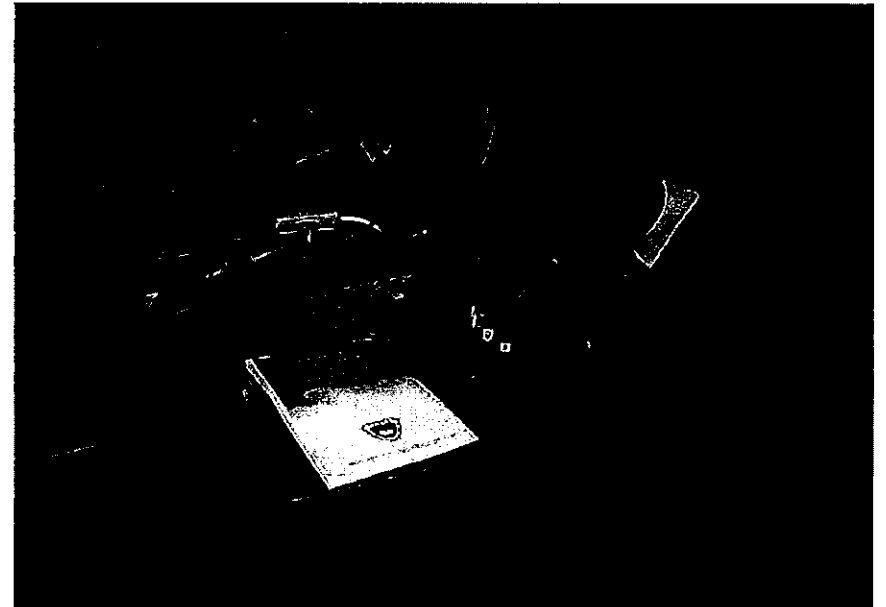
Basın - Tanıtım



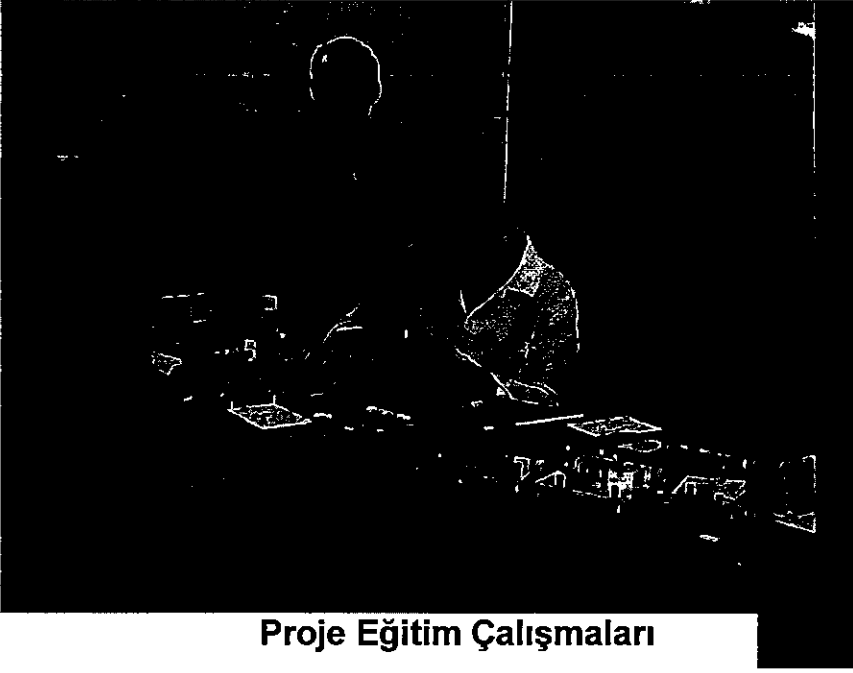
Basında JICA Projesi



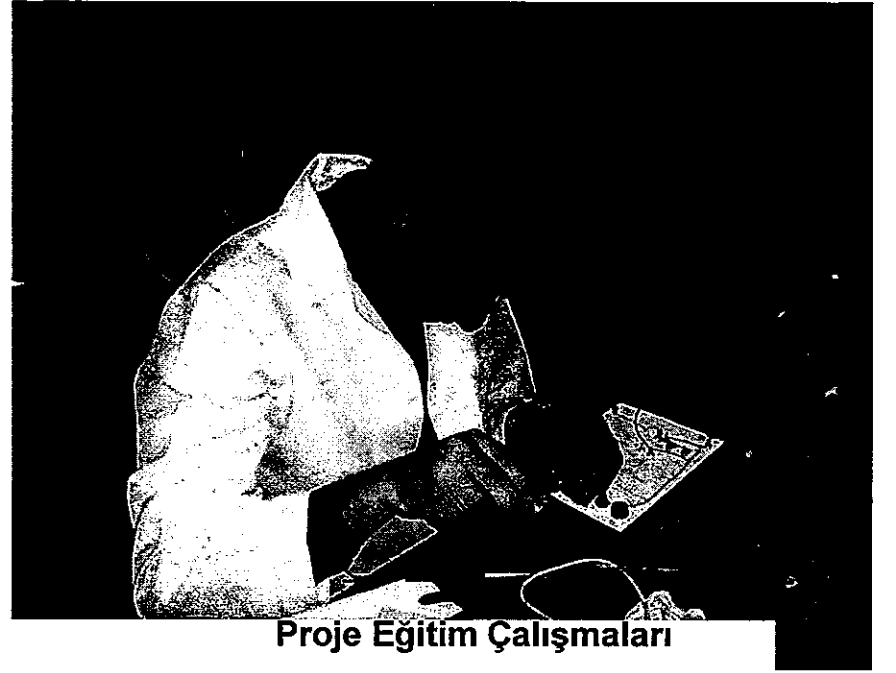
Proje Eğitim Çalışmaları



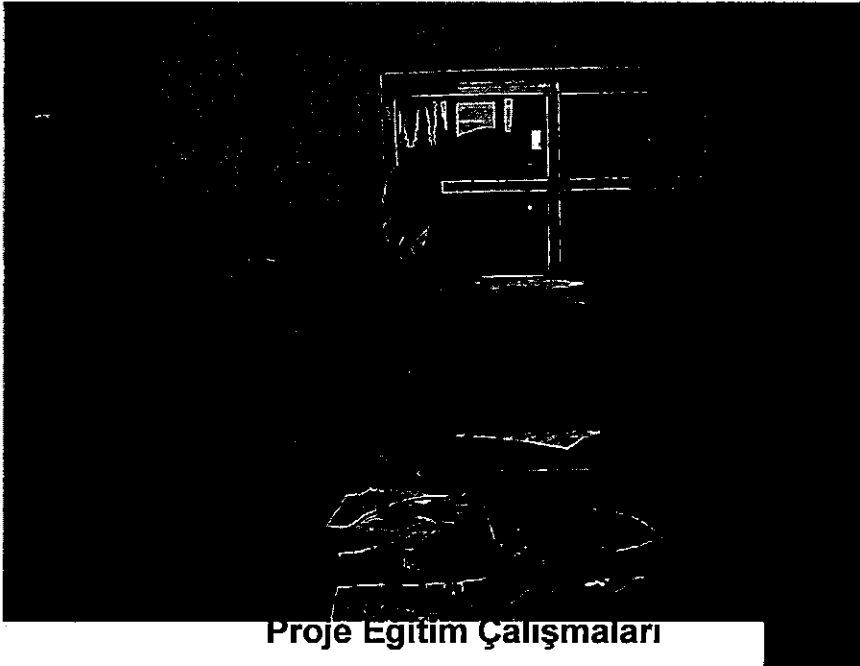
Proje Eğitim Çalışmaları



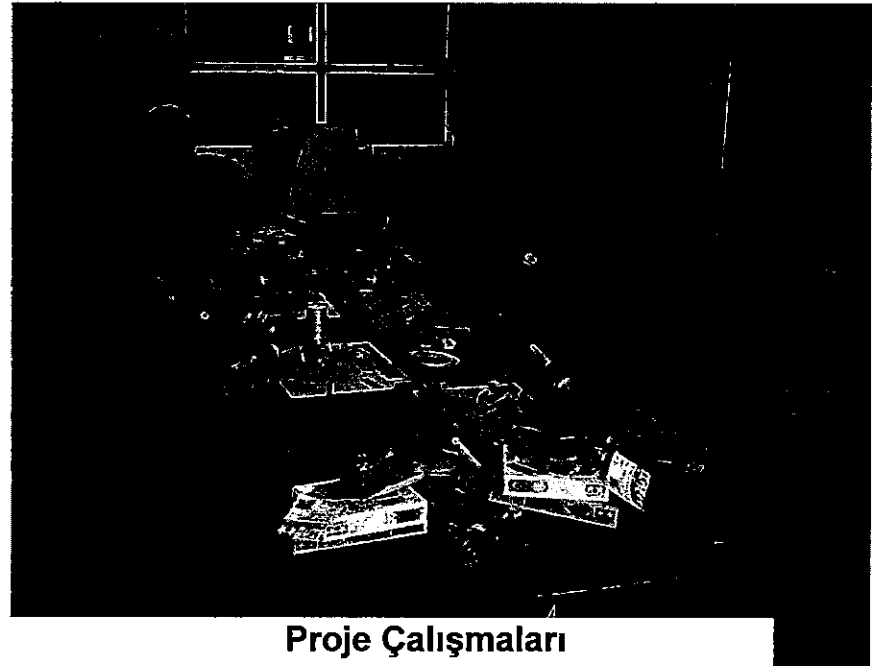
Proje Eğitim Çalışmaları



Proje Eğitim Çalışmaları



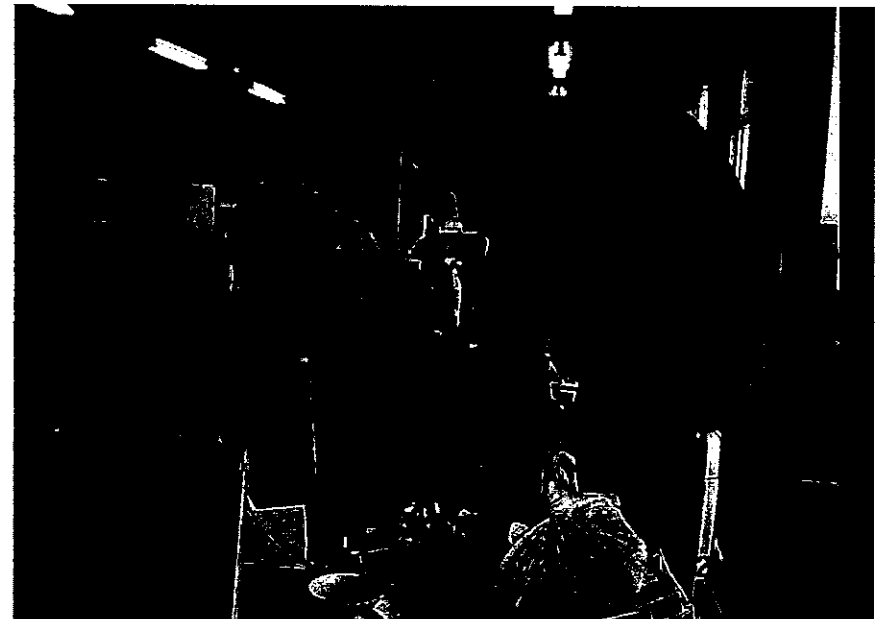
Proje Eğitim Çalışmaları



Proje Çalışmaları



Proje Eğitim Çalışmaları



Proje Eğitim Çalışmaları



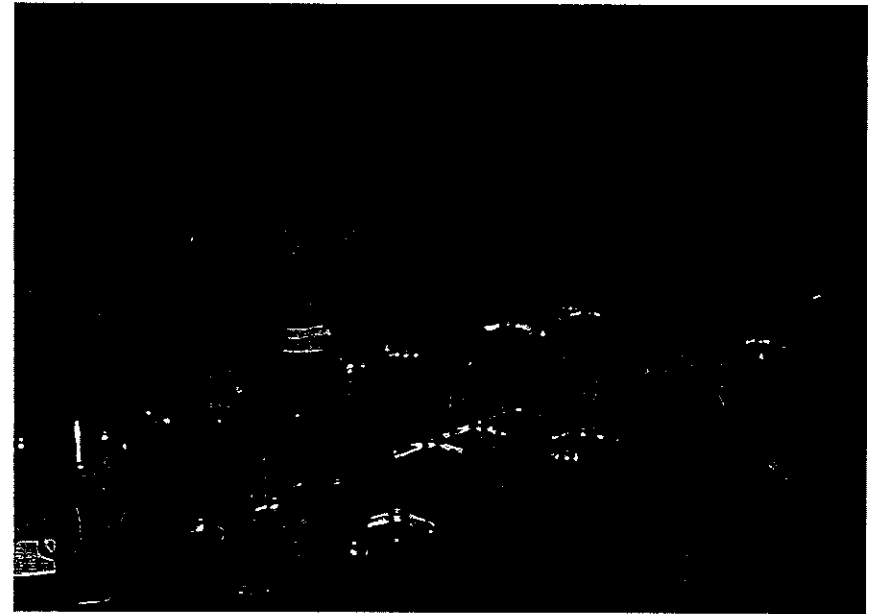
Proje Eğitim Çalışmaları



Türk Öğretmenlerimizin Yaptığı Robot Araba



**Bilgisayar Laboratuvarında Öğretmenlerimiz
Verilen Eğitim**



Yemekhane

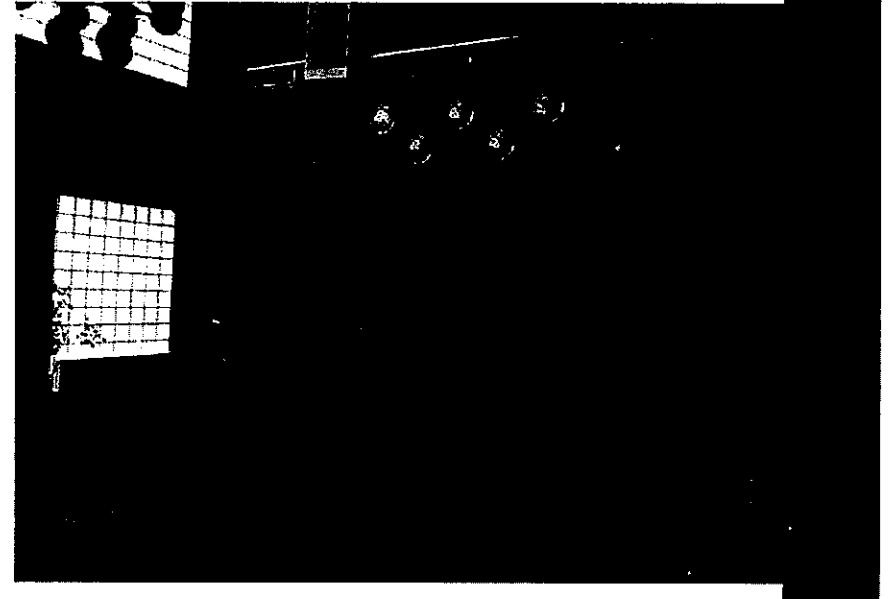
**2. PROJE (2007-2010)
ALANIN TÜRKİYE'DE YAYGINLAŞTIRILMASI**

SONUÇLARI

20 yaygınlaştırma okulu alanların açılması
Megep kapsamında modülerin yazılması
Megep projesine göre öğretim programının güncellenmesi
Laboratuvarların donatılması
Öğretmen Eğitimleri
Okulların takipleri

KAZANIMLAR

Öğretmen eğitim sisteminin organizasyonu
Alan kurulumu konusunda tecrübeler
Öğretmen eğitim program ve materyallerinin geliştirilmesi



3. PROJE (2012-2015) ALANIN ULUSLARASINDA YAYGINLAŖTIRILMASI

SONUÇLARI

9 ülke öğretmenlerine eğitimler
Uluslararası standartlarda eğitim programlarının geliştirilmesi
Tümevarım ilkesinin alana uygulanması
Proje tabanlı eğitimin uygulanması
Konaklama kalitesinin artırılması

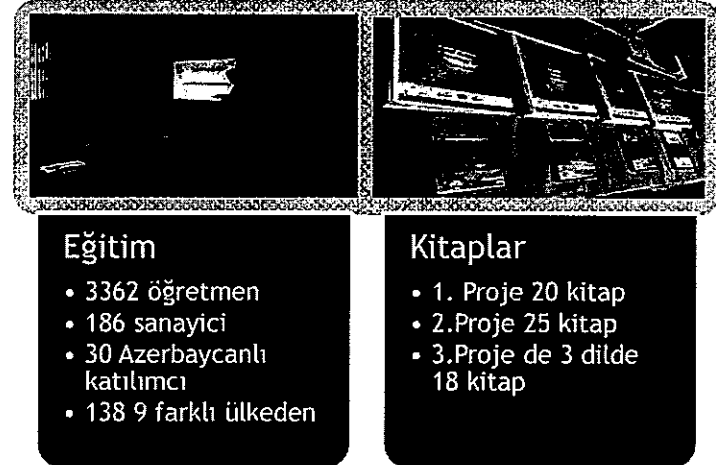
KAZANIMLAR

Sanayi bazlı tümevarım ve proje tabanlı eğitimin önemi
Kısa sürede etkili eğitim programı
Sonuç odaklı eğitimin etkileri
Uluslararası kurs ve proje yönetimi ve organizasyon tecrübesi
Değerlendirme ve Takip sistemleri

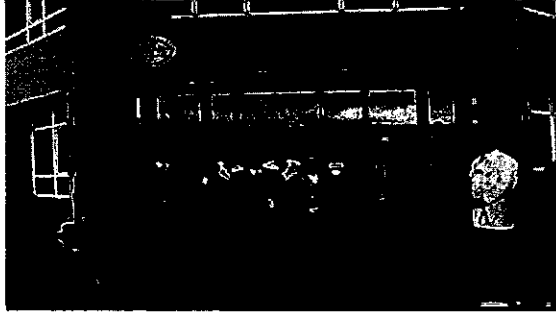
PROJELERE GÖRE JAPON TEKNİK DESTEĐİ



SAYILARLA TTC



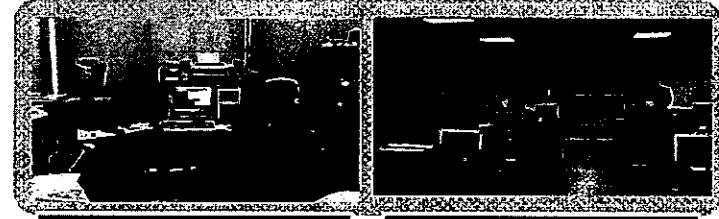
SAYILARLA TTC



EOT Alanı

- 20 yaygınlaştırma okulunda yaklaşık 6000 mezun
- Toplam 53 EOT alanı Türkiye genelinde
- Kazakistan Alan kurulumu 4 pilot okul
- Pakistanda eğitim çalışmaları
- Kırgızistan ve Tacikistanda hazırlık çalışmaları

SAYILARLA TTC



Teknoloji transferi

- 49 Japon uzman
- 3 ay ile 9 ay arası Japonya'da eğitim

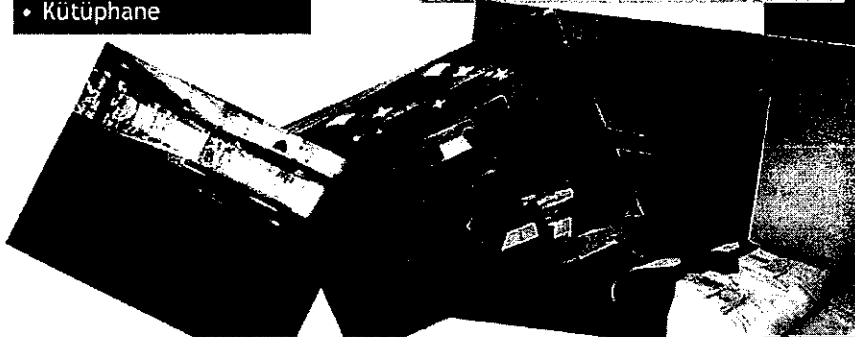
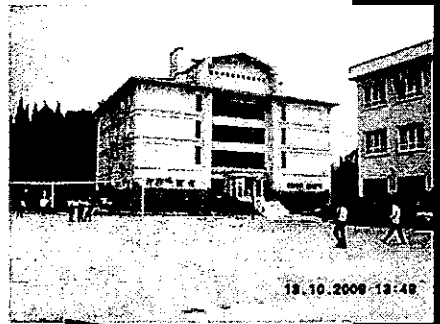
Yatırım

- 3.000.000 TL Eğitim Merkezi
- 1.500.000 TL eğitim merkezi ekipman
- 4.000.000\$ 2 okul laboratuvarlar

SAYILARLA TTC

Otel

- 60 yatak kapasiteli
- Kafe
- Restoran
- Kütüphane



KAPASİTEMİZ

Temelden ileri seviyeye kadar endüstriyel otomasyon sisteminde eğitim için yeterli ekipman

Proje tabanlı eğitim ve araştırma geliştirme ve sanayiye dönük çözümler için yeterli donanım

Uluslararası seviyede eğitim programları

Planla - Yap - Kontrol et - Uygula (PDCA) sistemi ile sürekli geliştirilen eğitim uygulamaları

Kaliteli ve konforlu konaklama merkezi

İNSAN KAYNAĞI

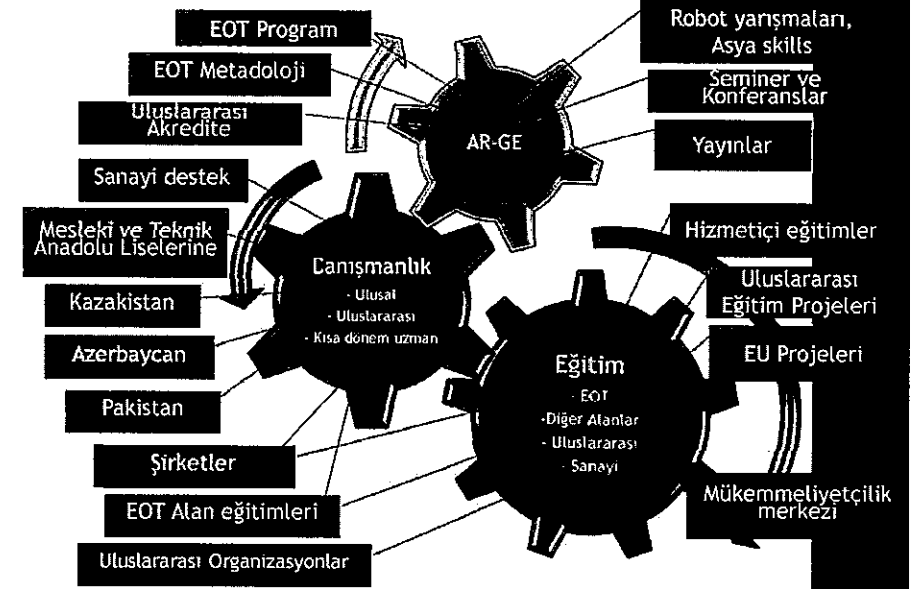
2001 yılından beri projede görev almış

Japonya'dan, İspanya'dan ve diğer ülkelerden teknoloji transferleri

Eğitim programı, materyal geliştiren ve öğretim sistem tasarımı

Ulusal ve Uluslararası Proje yönetimi, kurs organizasyonların da uzman

Ders kitabı yazar,



Hizmetçi Eğitimler

IATE proje çıktıları elde edilen deneyimlerin hizmetçi eğitimlerde yeni yaklaşımlar getirilmesi

Değerlendirme ve takip sistemi ile daha etkin kurslar

EOT ALANI İÇİN YAPILACAKLAR

Eğitim

EOT alan öğretmenlerinin bilgi ve becerilerinin güncel tutma

Proje tabanlı eğitim tasarımı

Geliştirme

Yeni programa uygun eğitim materyali geliştirme

Yeni Programa Uygun Öğretim Sistem Tasarımları yapmak

HER AY 2 HAFTALIK 2 KURSTAN,
YILDA 24 KURS

İhtiyaca göre EOT alanı öğretmenlerine

Elektrik elektronik, Bilgisayar, Mekanik

Üniversite Öğretmen ve öğrencilerine

• Teknoloji fakülteleri

Sanayi çalışanları, mühendislerine

Yabancı öğretmen ve çalışanlara

SPREAD SONRASI YAPILACAKLAR

Bir eğitim merkezinin sürdürülebilirliği, eğiticilerin üst düzey bilgilere sahip olup, bu bilgileri ülke çapında tüm ilgili öğretmenlere aktarmada süreklilik göstermeleri ile mümkün olur. Bu da, eğiticilerin bilgi ve becerilerini güncel tutmalarını gerektirir.

SPREAD SONRASI YAPILACAKLAR

SPREAD projesi kapsamındaki okullara ileri seviye yeni eğitimler

SPREAD projesinden sonra açılan 40 okuldaki EOT görev yapan öğretmenlerin eğitimi

Yeni programa göre eğitim materyalleri ve Öğretim sistemlerin tasarlanması

Sosyal ortaklar, okullar, mesleki ve teknik eğitim merkezleri ve özel sektör arasında işbirliğinin teşvik edilmesi.

Yarışmalar

Yerel otomasyon

Asya Skills

Yılda 24 tane teknik ve metodik kurs veren tescillenmiş hizmet içi eğitim ve EOT alanı destek ve geliştirme merkezi

14 yıldır elde edilen tecrübelerin amacına uygun etkin kullanılması Türkiye'nin Mesleki Eğitim kapasitesi için bir model olacaktır.



別添 12

WBTSS 達成度 2013-2015

別添12 WBTSS達成度 2013-2015

Group number	Course Name (Training period)	Countries	Language	Number of Participants	Training period in Turkey				After Training period in their countries			
					Level of Registration	Level of Operation*3	Level of Input data*4	Level of using calendar*5	Level of Access	Level of Contact	Level of Up-date*6	Level of Report*7
Group 1	CFT*1 for TVE Manager (Nov / 5 - Nov / 16 , 2012 : 2weeks)	Azerbaijan Kazakhstan	Russian	15	S	E	E	E	C	C	E	C
Group 2	CFT for TVE Trainers : IAT Basic (Dec / 3 - Dec / 21 , 2012 : 3weeks)	Pakistan	English	10	S	A	B	E	S	S	B	S
Group 3	CFT for TVE Trainers : IAT Basic (June 6, - , 2013:4-week)	Kazakhstan	Russian	12	S	C	C	E	D	E	E	E
Group 4	CFT for TVE Trainers : IAT Basic (September 16- October 11, 2013: 4-week)	Azerbaijan	Turkish	9	S	C	C	E	C	D	D	D
Group 5	CFT for TVE Trainers : IAT Intermediate (November 4- November 22, 2013:3-week)	Pakistan	English	10	S	A	B	E	S	A	A	A
Group 6	GT*2 for TVE Manager (Nov / 5 - Nov / 16 , 2012 : 2weeks)	Afghanistan, Kyrgyzstan, Tajikistan, Turkmenistan ,and Palestine	English (Russian)	8	S	C	D	E	E	E	E	E
Group 7	GT for TVE Trainers : IAT Basic (Apr / 15 - May / 10 , 2013 : 4weeks)	Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan	Russian	11	S	C	D	E	B	B	E	B
Group 8	GT for TVE Trainers: IAT Basic (Jan 6- January 31, 2014 :4-week)	Palestine	English	7	S	B	B	E	C	C	C	C
Group 9	GT for TVE Trainers: IAT Basic (Jan 6- January 31, 2014 :4-week)	Kyrgyzstan, Tajikistan, Turkmenistan and	Russian	10	S	B	B	E	D	E	E	C
Group 10	CFT for TVE Trainers : IAT Basic (June 6, - , 2013:4-week)	Kazakhstan	Russian	12	S	C	C	E	D	E	E	C

Group 11	CFT for TVE Trainers : <u>IAT Basic</u> (Oct 13, – Nov 7, 2014:4-week)	Azerbaijan	Turkish	6	S	B	B	E	E	E	E	E
Group 12	GT for TVE Trainers: <u>IAT Basic</u> Nov 10- Dec 5, 2014 :4-week)	Palestine	English	5	S	B	B	E	D	E	E	
Group 13	CFT for TVE Trainers : <u>IAT Advenced</u> (December 8 -26, 2014:3-week)	Pakistan	English	9	S	A	B	E	S	A	A	
Group 14	GT for TVE Trainers: IAT Basic (Jan 05- Jan 30, 2015 :4-week)	Kyrgyzstan, Tajikistan,	Russian	10	S	A	A	E	C	D	D	

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*1: CFT=Country Focus Training

*2: GT=Group Training

*3: Operation = Download , Attached documents, E-mail

*4: Input data = Answer to the test and questionnaire.

*5: Using calenda = Input action plan data to calenda

*6: Update=Update their action plan use calenda

*7: Report=Report of their IAT Lesson

S	100%
A	99% - 75%
B	74% - 50%
C	49% - 25%
D	24% - 1%
E	0%

